



## Florida Onsite Sewage Nitrogen Reduction Strategies Study

#### TASK C.21 PROGRESS REPORT

### **GCREC Mound Monitoring Sample Event Report No. 1**

#### Prepared for:

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**FDOH Contract CORCL** 

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Prepared by:



In Association With:





## GCREC Mound Monitoring Sample Event Report No. 1

#### 1.0 Background

Task C of the Florida Onsite Sewage Nitrogen Reduction Strategies Study includes monitoring at field sites in Florida to evaluate nitrogen reduction in soil and groundwater, to assess groundwater impacts from various onsite wastewater systems, and to provide data for parameter estimation, verification, and validation of models developed in Task D. The existing mound system at the Gulf Coast Research and Education Center (GCREC) is being monitored to serve as a bridge between the controlled GCREC pilot-scale testing conducted within the same type of soils and the uncontrolled monitoring at home sites in different soils throughout the state. The Task C.5 QAPP documents the objectives, monitoring framework, sample frequency and duration, and analytical methods to be used at the GCREC existing mound system site. The Task C.20 Instrumentation of GCREC Mound System and Plume Progress Reports No. 1 and 2 document the test area design, number and location of monitoring points, and preliminary sample collection and analyses.

#### 2.0 Purpose

This sample event report documents data collected from the first GCREC mound monitoring and sampling event which was conducted December 9, 2010 – December 10, 2010. This monitoring event consisted of measurement of flowrates dosed to the system, groundwater elevation measured within the standpipe piezometers, measurement of field parameters, and collection of groundwater samples and their analyses in a NELAC certified laboratory.

#### 3.0 Materials and Methods

#### 3.1 Project Site

The GCREC mound is located at the University of Florida Gulf Coast Research and Education Center (GCREC) in southeast Hillsborough County, Florida. The facility is situated on 475 acres of land that were donated by Hillsborough County government. Wastewater from the GCREC research offices and onsite dormitories flow to an existing OSTDS. Lab waste from Facility laboratories is not directed to the OSTDS. This existing

OSTDS consists of a pressure dosed mound system designed for 2,850 gallons per day. Two septic tanks (2,500 and 1,250 gallons) provide primary treatment followed by a dosing tank (3,000 gallons). The mound drainfield has 4,351 ft² of infiltrative area (design hydraulic loading rate of 0.65 gpd/ft²) with each half of the drainfield receiving alternating doses. As part of this project, two flow meters were installed to monitor the actual daily flow to the drainfield.

#### 3.2 Monitoring and Sampling Locations and Identification

A schematic of the GCREC mound monitoring network is shown in Figure 1. A sampling grid for groundwater screening was developed downgradient of the soil treatment unit. A 25-ft by 25-ft grid was staked then locations surveyed (x, y, and z). Transect lines AA through R are parallel to the southern edge of the mound and increase (higher letter identification) moving southward from the mound. Transect lines 1 through 15 (from east to west) are perpendicular to the southern edge of the mound. Groundwater monitoring points were installed in May, June, and November 2010. Two types of monitoring points were installed using either hand or drilling methods: drive point samplers and standpipe piezometers. Drive point samplers consist of a stainless steel drive tip and attached 1-in. long screen with a protective "umbrella" (to prevent soil entering and clogging the screen), and flexible tubing that extends to the ground surface (Figure 2). Standpipe piezometers consist of either ¾-in., 1¼-in., or 2-in. diameter PVC with 1-ft, 4-ft, 5-ft, or 10-ft long 0.010 slot PVC screens and PVC riser extending to the ground surface (refer to the Task C QAPP and Task C.20 Progress Reports #1 and #2 for additional detail). Figure 3 depicts an installed ¾-in. diameter PVC standpipe piezometer.

The monitoring locations established to date are depicted in Figure 1. Each monitoring location has been assigned a unique identification indicating the type of monitoring point (DP = drive point, PZ = standpipe piezometer), grid location (self explanatory), and depth below ground surface (bottom of the drive point or well screen in feet). For example DP-AA9-14 is a drive point sampler located on the grid at AA9 (see Figure 1) at approximately 14 ft below ground surface. Approximately 145 subsurface monitoring locations have been installed at the site to date.

A total of 62 specific monitoring locations were sampled during this GCREC mound sampling event. The nomenclature and sample identifications for this sampling event are listed in Table 1.

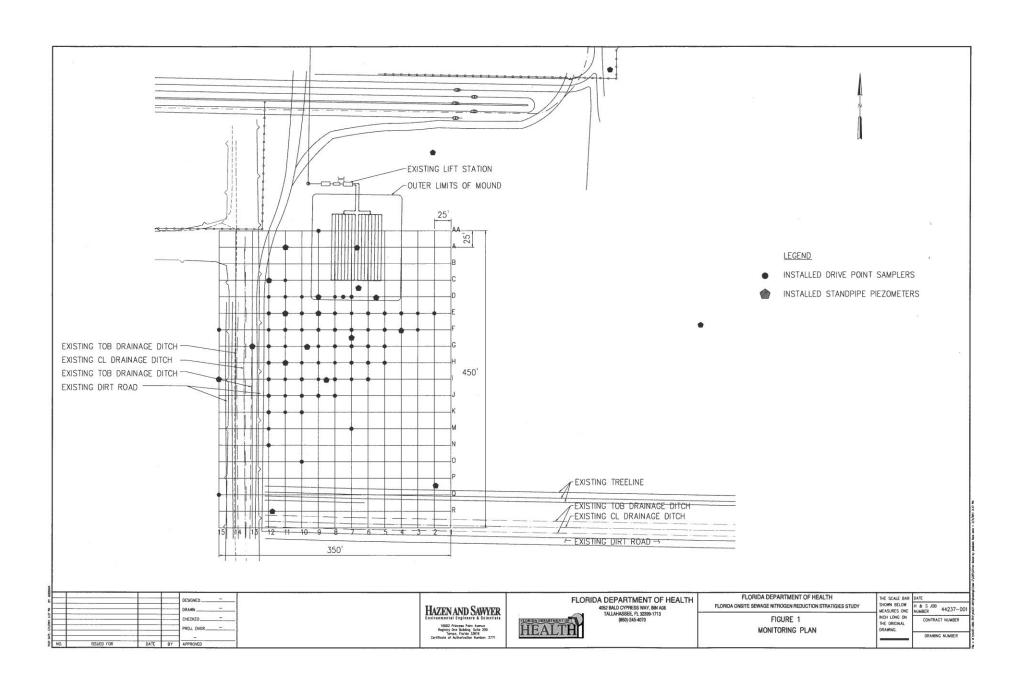




Figure 2 Stainless Steel Drive Point with Mesh Screen, Umbrella and Tubing



Figure 3
Installed 3/4" Diameter PVC Standpipe Piezometer

Table 1
GCREC Mound Sample Identification

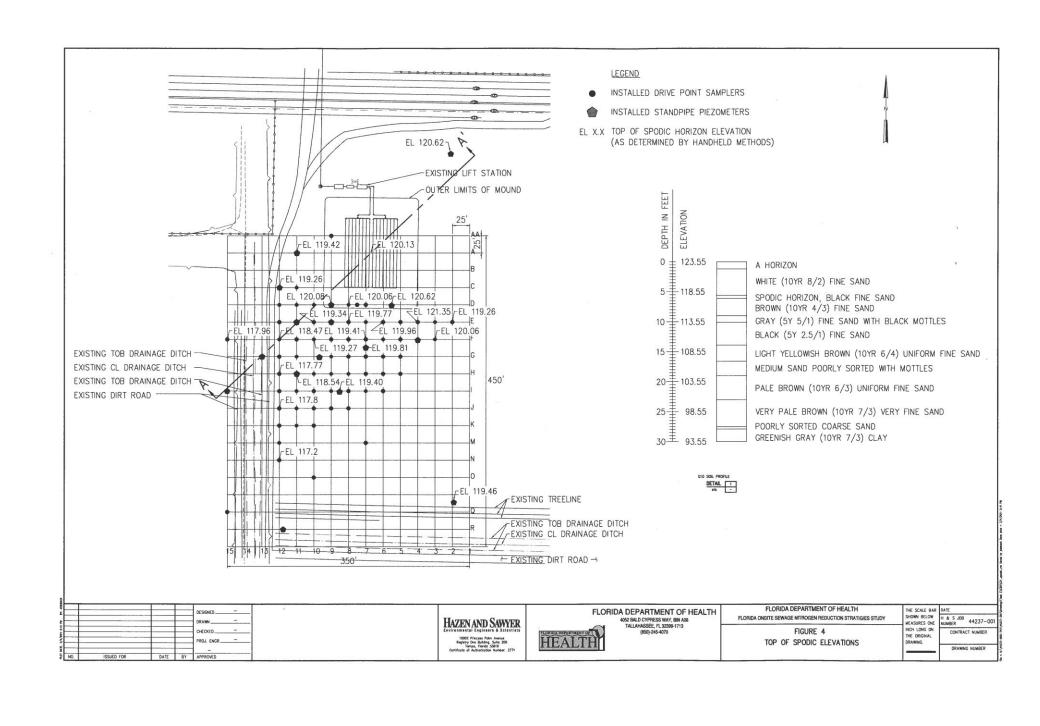
	Grid Location	Sample Identification	Notes	Bottom Elevation (ft)			
1	EX Lift Station	STE-EX Pump Tank	Wastewater Sample	N/A			
2	Bkgd, North	PZ04-BKG-9	1 1/4" Standpipe Piezometer, 4' screen	118.66			
3	Bkgd, North	PZ24-BKG-26	2" Standpipe Piezometer, 5' screen	101.41			
4	AA9	DP-AA9-14	SST Drive Point	110.68			
5	AA9	DP-AA9-22	SST Drive Point	103.08			
6	AA9	DP-AA9-27	SST Drive Point	98.28			
7	C12	PZ16-C12-28	3/4" Standpipe Piezometer, 1' screen	94.75			
8	D7.5	DP-D7.5-14	SST Drive Point	111.24			
9	D7.5	DP-D7.5-20	SST Drive Point	105.31			
10	D7.5	DP-D7.5-26	SST Drive Point	99.24			
11	D9	DP-D09-6	SST Drive Point	118.35			
12	D9	DP-D09-8	SST Drive Point	116.45			
13	D9	DP-D09-15	SST Drive Point	109.18			
14	D9	DP-D09-21	SST Drive Point	103.18			
15	D9	DP-D09-27	SST Drive Point	97.18			
16	E12	DP-E12-10	SST Drive Point	113.22			
17	E12	DP-E12-15	SST Drive Point	108.66			
18	E12	DP-E12-22	SST Drive Point	101.56			
19	E12	DP-E12-28	SST Drive Point	95.71			
20	F8	DP-F08-14	SST Drive Point	110.43			
21	F8	DP-F08-20	SST Drive Point	103.96			
22	F8	DP-F08-28	SST Drive Point	96.18			
23	F11	DP-F11-11	SST Drive Point	112.68			
24	F11	DP-F11-15	SST Drive Point	108.88			
25	F11	DP-F11-18	SST Drive Point	105.73			
26	F11	DP-F11-21	SST Drive Point	102.93			
27	F11	DP-F11-24	SST Drive Point	99.88			
28	F11	DP-F11-27	SST Drive Point	96.73			
29	F15	DP-F15-14	SST Drive Point	108.82			
30	F15	DP-F15-20	SST Drive Point	102.87			
31	F15	DP-F15-26	SST Drive Point	96.97			

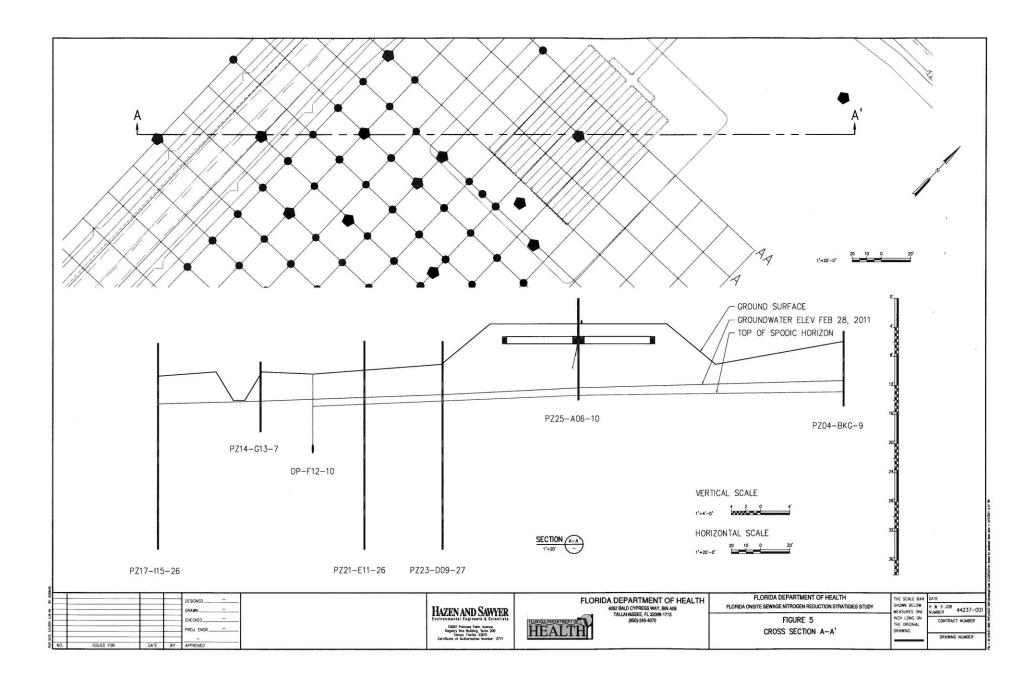
Table 1
GCREC Mound Sample Identification

	·					
	Grid Location	Sample Identification	Notes	Bottom Elevation (ft)		
32	G7	DP-G07-13	SST Drive Point	111.63		
33	G7	DP-G07-15	SST Drive Point	109.56		
34	G7	DP-G07-17	SST Drive Point	106.76		
35	G7	DP-G07-21	SST Drive Point	103.31		
36	G7	DP-G07-24	SST Drive Point	100.51		
37	G7	DP-G07-27	SST Drive Point	97.61		
38	G12	DP-G12-15	SST Drive Point	108.37		
39	G12	DP-G12-21	SST Drive Point	102.32		
40	G12	DP-G12-27	SST Drive Point	96.37		
41	16	DP-I06-14	SST Drive Point	110.24		
42	16	DP-I06-20	SST Drive Point	103.99		
43	16	DP-I06-26	SST Drive Point	97.94		
44	l15	PZ17-I15-26	3/4" Standpipe Piezometer,1' screen	97.09		
45	J9	DP-J09-14	SST Drive Point	109.61		
46	J9	DP-J09-20	SST Drive Point	103.36		
47	J9	DP-J09-26	SST Drive Point	97.11		
48	J12	DP-J12-15	SST Drive Point	108.26		
49	J12	DP-J12-20	SST Drive Point	102.61		
50	J12	DP-J12-27	SST Drive Point	96.36		
51	M7	DP-M07-15	SST Drive Point	108.975		
52	M7	DP-M07-21	SST Drive Point	102.65		
53	M7	DP-M07-27	SST Drive Point	96.95		
54	N12	DP-N12-14	SST Drive Point	108.4		
55	N12	DP-N12-21	SST Drive Point	101.725		
56	N12	DP-N12-27	SST Drive Point	95.63		
57	O10	DP-O10-12	SST Drive Point	110.71		
58	O10	DP-O10-18	SST Drive Point	104.56		
59	O10	DP-O10-24	SST Drive Point	98.56		
60	Q15	DP-Q15-15	SST Drive Point	108.2		
61	Q15	DP-Q15-21	SST Drive Point	102.29		
62	Q15	DP-Q15-26	SST Drive Point	96.4		

#### 3.3 Soil Characteristics

During the instrumentation of the mound, at five locations (south end of the mound, E9, G10, F4, and west side of the mound), continuous soil cores were collected to determine general soil properties (lithology, soil features, organic matter content, grain size, etc) as summarized in Table 2. However, only at one location, G10, were continuous soil cores collected to the confining Hawthorn clay layer. In addition, handheld methods were used to determine the top of the spodic layer as shown in Figure 4. Cross section A-A' is depicted in Figure 5.





#### Table 2 June 2010 Small Direct Push Rig (6620 Geoprobe<sup>™</sup>) Soil Core Descriptions

Identifier Surface Depth					
Grid Location	idontino	Elevation	bgs	Description	
		(ft)	(ft)	'	
South end of Mound	PZ10-CD6-13	129.51	0-0.4'	Grass/fill	
CD6.5			0.4-0.9'	Gray fine sand with yellow and white mottles	
			0.9-6.6'	Uniform yellow fine grain sand	
			6.5'	Saturation	
			6.6-6.7	Dark brown (10YR 3/3) fine sand	
			6.7-10.7	Light gray (5Y 7/2) fine sand	
			10.7-11.5'	Dark brown (10YR 3/3) fine sand	
			11.5-12.3	Yellow (5Y 7/6) fine sand	
			12.3-13.45	Light gray (5Y 7/2) fine sand	
			13.45-16.1	Spodic horizon, dark brown (7.5YR 3/3) fine sand	
			16.1-17.4	Brown (7.5YR 4/4) fine sand	
E9	PZ11-E09-10	124.06	0-2.2'	A Horizon top soil	
			2.2-2.7'	Pale yellow (5Y 7/3) fine sand with mottles	
			2.7-5.8'	Yellowish brown (10YR 5/4) fine sand	
			5.8-6.9'	Very dark brown (7.5YR 2.5/3) fine sand	
			6.1'	Saturation	
			6.9-10.3'	Medium brown (10YR 5/3) fine sand	
			10.3-15'	Black (10YR 2/1) fine sand	
G10	Abandoned	123.55	0-1.2'	A Horizon top soil	
	PZ12		1.2-2.8'	White (10YR 8/2) fine sand	
			2.8-6.1'	Spodic horizon, black fine sand	
			6.1-9'	Brown (10YR 4/3) fine sand	
			9'	Saturation	
			9-10.1'	Gray (5Y 5/1) fine sand with black mottles	
			10.1-13.9'	Black (5Y 2.5/1) fine sand	
			13.9-16.6	Light yellowish brown (10YR 6/4) uniform fine sand	
			16.6-19'	Medium sand poorly sorted, well rounded (3mm diameter) with mottles	
			19-23'	Pale brown (10YR 6/3) uniform fine sand	

Table 2
June 2010 Small Direct Push Rig (6620 Geoprobe <sup>TM</sup> )
Soil Core Descriptions

Son Core Descriptions						
Grid Location	Identifier	Surface Elevation (ft)	Depth bgs (ft)	Description		
G10 (con't)	Abandoned PZ12	123.55	23-27.5	Very pale brown (10YR 7/3) very fine sand		
			27.5-27.9	Poorly sorted coarse sand		
			27.9-30.0	Greenish gray (Gley1 6/5GY) clay, Hawthorn confining layer		
F4	PZ13-F04-8	124.42	0-4.2'	A Horizon top soil		
			4.2-4.7'	Pale yellow (5Y 8/4) fine sand with mottles		
			4.7-13.5'	Spodic horizon, dark brown sand		
			6.3'	Saturation		
Westside of Mound		~129	0-7.4	Mound sand with some mottles		
			7.4-8.4	Dark oxidized sand		
			8.4'	Saturation		
			8.4-9.4	Saturated very pale brown fine sand		
			9.4-10'	Spodic horizon, dark brown fine sand		
			10-12'	Dark yellowish brown (10YR 4/6) fine sand		
			12-15'	Dark brown fine sand		

#### 3.4 Operational Monitoring

Wastewater flow to the mound system is measured via two (2") flow meters located on the dose lines to the mound which were installed in December, 2009. The PNRS II test facility programmable logic controller (PLC) records flow data from these meters. Appendix A provides summary tables of the recorded wastewater flow data for the GCREC mound pumps between June 14, 2010 and December 10, 2010 (Day 28 through Day 207 since PNRS II test facility start-up). Prior to July 16, 2010, the GCREC air conditioning systems were discharging considerable quantities of A/C condensate to the sewer, and this flow was rerouted on July 16th. The wastewater flow to the GCREC mound has averaged approximately 1700 gpd since condensate rerouting occurred.

#### 3.5 Meteorological Data

A weather station is located at the GCREC with weather conditions recorded every minute and stored on a private website. Table 3 provides the recorded meteorological data daily averages leading up to and during the sample event. Unseasonably cold

weather and very low rainfall characterized the month of December 2010. Only 0.5 in. of rain fell for the month and only 0.03 in. occurred over the 5 day period from December 6-10, 2010. Appendix B provides summary tables of the average monthly recorded meteorological data.

Table 3
Meteorological Data Daily Averages Measured December 6, 2010 – December 10, 2010

Date	Temp Avg 60 cm (°F)	Temp Avg 10 m (°F)	Temp Soil Avg -10 cm (°F)	Dewpoint Avg 2m (°F)	Relative Humidity Avg 2m (%)	Rain Total 2m (in)	Wind Speed Avg 10m (mph)
12-6-10	44.08	43.81	63.34	32.19	66	0	8.7
12-7-10	40.44	40.95	61.3	26.71	62	0	7.22
12-8-10	45.03	45.58	60.32	29.72	59	0	5.6
12-9-10	48.45	48.36	60.71	34.76	62	0.03	6.37
12-10-10	51.85	51.49	60.72	45.45	83	0	6.51

#### 3.6 Groundwater Level Monitoring

The piezometer designations listed in Table 4 correspond to the locations at which groundwater levels are measured. The groundwater level within the standpipe piezometers was measured on December 9, 2010 for this sampling event. Figure 6 shows the surficial groundwater contours on that day.

Table 4
Standpipe Piezometer Groundwater Level Measured December 9, 2010

otaliapipe i lezometer orounawater Level incasarea becember 3, 2010					
Fig 4 Identification	Location	Identification	Water Table Elevation (ft)		
1	Bkgd, North	PZ01-BKG-9	122.97		
2	Bkgd, North	PZ04-BKG-9	121.76		
3	Bkgd, North	PZ24-BKG-26	121.46		
4	Bkgd, East	PZ05-BKG-9	121.53		
5	Bkgd, NW	PZ06-BKG-12	122.09		
6	A11	PZ15-A11-6	119.77		
7	C12	PZ16-C12-28	119.37		
8	CD6.5	PZ10-CD6-13	120.37		
9	D5.5	PZ07-D05-7	120.22		
10	D9	PZ23-D09-27	119.64		
11	E9	PZ11-E09-10	119.57		
12	E11	PZ21-E11-26	119.22		
13	E11	PZ22-E11-15	119.21		
14	F4	PZ13-F04-8	120.16		
15	FG7	PZ08-FG7-6	119.65		
16	G9.75	PZ19-G10-26	119.18		
17	G9.75	PZ20-G10-15	119.17		
18	G13	PZ14-G13-7	118.72		
19	H11	PZ03-H11-6	119.21		
20	18.5	PZ09-I08-5	119.15		
21	I15	PZ17-I15-26	118.26		
22	PQ1.75	PZ02-P02-9	118.52		
23	R12	PZ18-R12-26	118.22		

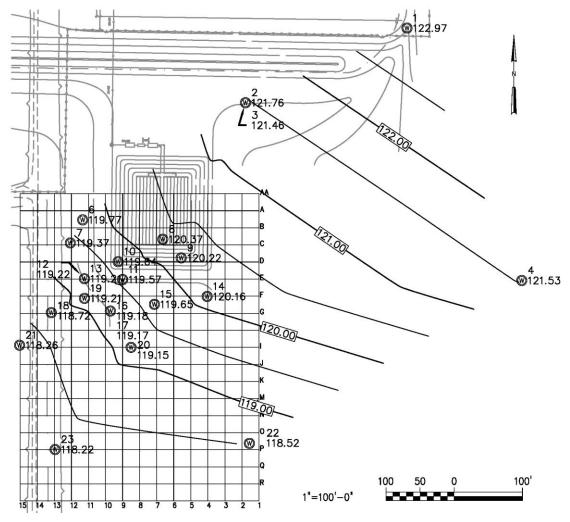


Figure 6 Surficial Groundwater Contours December 9, 2010

#### 3.7 Water Quality Sample Collection and Analyses

Groundwater and effluent water quality samples for the GCREC mound Sample Event No. 1 were collected December 9-10, 2010. A sample of STE was collected from the existing lift station (see Figure 1) which supplies STE to the GCREC mound. STE from the lift station tank was collected directly into the analysis-specific containers supplied by the analytical laboratory using a peristaltic pump.

Groundwater samples were collected using a peristaltic pump attached to either the drivepoint or standpipe piezometer dedicated tubing and directing the sample into the analysis-specific containers after sufficient purging had occurred. The analysis-specific containers were supplied by the analytical laboratory and contained the appropriate preservatives. The analysis-specific containers were labeled, placed in coolers and transported on ice to the analytical laboratory. Each sample container was secured in packing material as appropriate to prevent damage and spills, and was recorded on chain-of-custody forms supplied by the laboratory. Chain of custody forms, provided in Appendix C, were used to document the transfer of samples from field personnel to the analytical laboratory. One chain of custody form was filled out for each set of samples and placed inside the cooler.

Equipment blank, field blank, and field sample duplicates were taken. The equipment blank was collected by pumping deionized water provided by the laboratory through the cleaned pump tubing. These samples were then analyzed for the same parameters as the GW samples. One field blank was collected by filling sample containers with deionized water that had been transported from the laboratory into the field along with other sample containers. A second field blank was collected by filling sample containers with the tap water used for rinsing. The field sample duplicates were collected immediately subsequent to the regular samples. The field duplicate samples taken include:

- DP-D09-15
- DP-F08-20
- DP-F15-20
- DP-G12-15
- DP-J12-20
- STE-EX Pump Tank

Field parameters were measured using portable electronic probes with probe tips placed in a flow-cell device as groundwater was being pumped (see Figure 7). Field parameters include pH, specific conductance, temperature (Temp), and dissolved oxygen (DO).

Field parameter results are listed in Appendix D. The STE and groundwater samples were analyzed by the laboratory for: total alkalinity, total Kjeldahl nitrogen (TKN-N), ammonia nitrogen (NH<sub>3</sub>-N), and nitrate/nitrite nitrogen (NO<sub>X</sub>-N). Additionally, at some of the locations with elevated conductivity in previous preliminary sampling, total organic carbon (TOC) and dissolved organic carbon (DOC) were included. Table 5 lists the analytical parameters, analytical methods, and detection limits for these analyses.

Once analytical results are obtained from the laboratory, GCREC Mound Data Summary Report No. 1 (Task C22) will be prepared describing the results from this sampling event.

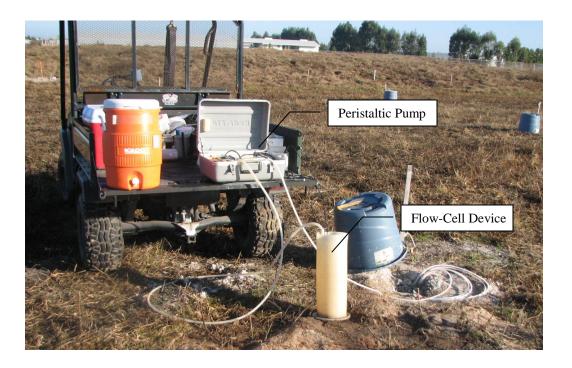


Figure 7
Flow-Cell Device

Table 5
Analytical Parameters, Method of Analysis, and Detection Limits

Analytical Parameter	Method of Analysis	Laboratory Detection Limit (mg/L)
Total Alkalinity as CaCO <sub>3</sub>	SM 2320B	2 mg/L
Total Kjeldahl Nitrogen (TKN-N)	EPA351.2	0.05 mg/L
Ammonia Nitrogen (NH <sub>3</sub> -N)	EPA350.1	0.01 mg/L
Nitrate/Nitrite Nitrogen (NO <sub>X</sub> -N)	EPA353.2	0.01 mg/L
Total Organic Carbon (TOC)	SM 5310B	0.5 mg/L
Dissolved Organic Carbon (DOC)	SM 5310B	1.0 mg/L



## **Appendix A: GCREC Mound Wastewater Flow Data**

### Table A.1 GCREC Mound Metered Wastewater Flow Data

Date Range	Flow Meter Totalized Pump 1 to GCREC Mound (avg. gpd)	Flow Meter Totalized Pump 2 to GCREC Mound (avg. gpd)	Total Recorded Flow (avg. gpd)		
Before A/C Condensate D	Diversion				
12/21/10 – 7/16/10	1,650	591	2,241		
After A/C Condensate Diversion					
7/19/10 — 1/9/11	789	911	1,700		

Table A.2
Summary of Daily Wastewater Flows (PLC Recorded)

Summary of Daily Wastewater Flows (PLC Recorded)					
	Date Range	Average Recorded Flow	Std. Dev.	MIN	MAX
	24.5 . 44.196	(gpd)	010. 201.	(gpd)	(gpd)
Before A/C Condens	sate Diversion				
Pump 1 to Mound		5,422	1,565	3,013	9,117
Pump 2 to Mound	6/14/10 - 7/16/10	-	-	-	-
Sum of Both Pumps		5,422	1,565	3,013	9,117
After A/C Condensa	te Diversion				
Pump 1 to Mound		790	366	284	2,640
Pump 2 to Mound	7/16/10 – 12/10/10	917	403	291	3,090
Sum of Both Pumps		1,707	749	584	5,730

## Table A.3 PLC Recorded Daily Wastewater Flows (6/14/10 – 12/10/10)

Day Since Start-Up	Date	Pump 1 to GCREC Mound	Pump 2 to GCREC Mound	Sum Pump 1 and 2
28	6/14/2010	PR	PR	-
29	6/15/2010	6,436	0	6,436
30	6/16/2010	5,035	0	5,035
31	6/17/2010	7,841	0	7,841
32	6/18/2010	5,268	0	5,268
33	6/19/2010	3,668	0	3,668
34	6/20/2010	3,013	0	3,013
35	6/21/2010	5,250	0	5,250
36	6/22/2010	5,734	0	5,734

Day Since	Date	Pump 1 to	Pump 2 to	Sum Pump 1 and 2
Start-Up 37	6/23/2010	GCREC Mound 4,672	GCREC Mound 0	4,672
38	6/24/2010	5,061	0	5,061
39	6/25/2010	5,142	0	5,142
40	6/26/2010	4,546	0	4,546
41	6/27/2010	4,044	0	4,044
42	6/28/2010	7,189	0	7,189
43	6/29/2010	4,739	0	4,739
44	6/30/2010	9,117	0	9,117
45	7/1/2010	PR	PR	-
46	7/2/2010	NR	NR	-
47	7/3/2010	NR	NR	-
48	7/4/2010	NR	NR	-
49	7/5/2010	NR	NR	-
50	7/6/2010	NR	NR	-
51	7/7/2010	NR	NR	
52	7/8/2010	NR	NR	-
53	7/9/2010	NR	NR	-
54	7/10/2010	NR	NR	_
55	7/11/2010	NR	NR	_
56	7/12/2010	NR	NR	_
57	7/13/2010	NR	NR	-
58	7/14/2010	NR	NR	-
59	7/15/2010	NR	NR	-
60	7/16/2010	NR	NR	-
61	7/17/2010	NR	NR	-
62	7/18/2010	NR	NR	-
63	7/19/2010	NR	NR	-
64	7/20/2010	NR	NR	-
65	7/21/2010	NR	NR	
66	7/22/2010	NR	NR	-
67	7/23/2010	NR	NR	1
68	7/24/2010	NR	NR	-
69	7/25/2010	NR	NR	-
70	7/26/2010	NR	NR	-
71	7/27/2010	NR	NR	-
72	7/28/2010	NR	NR	-
73	7/29/2010	NR	NR	-
74	7/30/2010	PR	PR	-

Day Since Start-Up	Date	Pump 1 to GCREC Mound	Pump 2 to GCREC Mound	Sum Pump 1 and 2
75	7/31/2010	485	639	1,124
76	8/1/2010	312	314	626
77	8/2/2010	1,021	1,192	2,213
78	8/3/2010	814	814	1,628
79	8/4/2010	994	825	1,819
80	8/5/2010	842	966	1,808
81	8/6/2010	982	793	1,775
82	8/7/2010	321	316	637
83	8/8/2010	319	463	782
84	8/9/2010	960	808	1,768
85	8/10/2010	780	943	1,723
86	8/11/2010	962	951	1,913
87	8/12/2010	933	776	1,709
88	8/13/2010	936	925	1,861
89	8/14/2010	457	466	923
90	8/15/2010	452	452	904
91	8/16/2010	946	1,363	2,309
92	8/17/2010	986	1,164	2,150
93	8/18/2010	930	1,056	1,986
94	8/19/2010	1,129	945	2,074
95	8/20/2010	782	964	1,746
96	8/21/2010	616	607	1,223
97	8/22/2010	450	456	906
98	8/23/2010	943	926	1,869
99	8/24/2010	1,092	939	2,031
100	8/25/2010	1,092	1,229	2,321
101	8/26/2010	1,242	1,085	2,327
102	8/27/2010	1,073	1,226	2,299
103	8/28/2010	745	742	1,487
104	8/29/2010	749	761	1,510
105	8/30/2010	917	1,204	2,121
106	8/31/2010	900	1,082	1,982
107	9/1/2010	1,053	1,049	2,102
108	9/2/2010	759	1,223	1,982
109	9/3/2010	1,659	1,715	3,374
110	9/4/2010	290	441	731
111	9/5/2010	599	444	1,043
112	9/6/2010	450	593	1,043

1,060

1,055

Pump 2 to

**GCREC Mound** 

909

1,383

Sum Pump 1 and 2

1,969

2,438

Pump 1 to

**GCREC Mound** 

1,201

150

Day Since

Start-Up

113

114

Date

9/7/2010

9/8/2010

10/14/2010

2,472

1,271

292

Pump 2 to

**GCREC Mound** 

739

Sum Pump 1 and 2

1,031

Pump 1 to

**GCREC Mound** 

433

188

Day Since

Start-Up

151

Date

10/15/2010

11/21/2010

879

446

Appendix A December 2010

Day Since Start-Up	Date	Pump 1 to GCREC Mound	Pump 2 to GCREC Mound	Sum Pump 1 and 2
189	11/22/2010	744	1,118	1,862
190	11/23/2010	984	1,555	2,539
191	11/24/2010	906	1,073	1,979
192	11/25/2010	291	445	736
193	11/26/2010	440	294	734
194	11/27/2010	438	596	1,034
195	11/28/2010	293	443	736
196	11/29/2010	899	1,088	1,987
197	11/30/2010	1,880	2,048	3,928
198	12/1/2010	2,640	3,090	5,730
199	12/2/2010	892	1,106	1,998
200	12/3/2010	752	1,089	1,841
201	12/4/2010	291	330	621
202	12/5/2010	446	561	1,007
203	12/6/2010	1,116	1,134	2,250
204	12/7/2010	916	938	1,854
205	12/8/2010	1,082	1,284	2,366
206	12/9/2010	771	942	1,713
207	12/10/2010	940	1,280	2,220

<sup>&</sup>lt;sup>1</sup>NR = No reading <sup>2</sup>PR = Partial daily flow recorded



### **Appendix B: GCREC Weather Station Data**

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Table B.1 Monthly Recorded Meteorological Data

													2m Rain	10m	10m	10m		
							Tsoil avg	Tsoil	Tsoil	2m	RelHum		max over	Wind	Wind	Wind	WDir avg	
	60cm T	60cm T	60cm T	10m T	10m T	10m T	-10cm	min(avg)	max(avg)	DewPt	avg 2m	2m Rain	15min	avg	min	max	10m	ET avg
Period	avg (F)	min (F)	max (F)	avg (F)	min (F)	max (F)	(F)	-10cm (F)	-10cm (F)	avg (F)	(pct)	tot (in)	(in)	(mph)	(mph)	(mph)	(deg)	(in)
Jan-10	53.1	23.97	82.38	53.67	25.75	80.78	59.67	51.13	66.63	44.57	76	3.19	0.57	7.6	0	32.8	348	0.05
Feb-10	53.75	30.84	78.96	53.88	34.39	76.75	59.86	54.32	65.75	43.97	74	2.22	0.47	7.85	0	36.13	348	0.07
Mar-10	59.24	32.89	82.26	59.54	37.02	80.42	62.09	55.31	68.11	48.75	73	6.15	0.44	8.25	0	38.27	289	0.1
Apr-10	69.78	44.74	88.54	70.02	51.53	86.36	70.78	63	75.72	59.5	74	2.79	0.52	7.46	0	44.17	94	0.15
May-10	77.78	62.37	93.63	77.61	65.19	91.15	79.11	73.17	83.97	68.62	77	0.89	0.13	6.75	0	31.1	126	0.18
Jun-10	80.91	65.84	99.09	80.81	68.68	95.32	82.32	76.69	88.63	72.87	80	8.25	1.3	5.85	0	50.47	116	0.19
Jul-10	80.67	68	96.21	80.81	70.7	93.81	82.58	77.49	87.03	74.05	82	7.3	0.48	5.95	0	35.37	103	0.18
Aug-10	80.54	70.59	96.87	80.58	71.64	93.81	82.63	79.11	87.85	75.03	85	13.51	1.74	5.78	0	43.53	154	0.16
Sep-10	78.91	63.43	95.88	79.14	67.87	92.93	80.83	78.17	83.39	72.11	82	3.42	0.55	6.33	0	41.6	84	0.16
Oct-10	71.98	51.24	93	72.84	55.15	90.25	74.97	71.83	78.62	61.55	73	0.01	0.01	5.56	0	32	31	0.11
Nov-10	65.75	39.95	86.77	66.38	41.73	84.13	69.47	64.33	75.34	56.97	76	1.24	0.16	6.52	0	30.53	55	0.07
Dec-10	50.64	22.86	78.37	51.3	27.61	76.46	60.71	54.61	71.33	39.83	71	0.5	0.05	7.33	0	36.77	354	0.04



### **Appendix C: Field Parameter Analyses**

Table C.1
Field Parameter Results
(December 9-10, 2010)

		(Dec	cember 9-10, 2010		
	Sample Identification	рН	Temperature (°C)	Specific Conductance (µS)	Dissolved Oxygen (mg/L)
1	STE-EX Pump Tank	7.33	19.9	1273	0.10
2	PZ04-BKG-9	5.3	21.6	72.9	1.10
3	PZ24-BKG-26	5.1	24.1	296.2	0.70
4	DP-AA9-14	5.1	25.1	281.9	0.89
5	DP-AA9-22	4.9	23.3	318.7	1.04
6	DP-AA9-27	4.8	22.7	293.2	0.84
7	PZ16-C12-28	5.6	27.2	291.8	0.70
8	DP-D7.5-14	7.01	21.2	432	1.10
9	DP-D7.5-20	7.01	22.2	258	2.55
10	DP-D7.5-26	7.01	21.3	295	2.01
11	DP-D09-6	4.82	17.0	363	5.59
12	DP-D09-8	4.65	18.4	380	3.52
13	DP-D09-15	5.30	19.1	433	3.20
14	DP-D09-21	5.78	21.7	300	1.35
15	DP-D09-27	5.97	20.2	270	2.26
16	DP-E12-10	5.48	19.2	491	4.68
17	DP-E12-15	4.88	22.2	550	2.47
18	DP-E12-22	5.00	20.4	464	1.95
19	DP-E12-28	5.17	21.9	297	2.01
20	DP-F08-14	7.04	22.4	1412	6.09
21	DP-F08-20	6.34	23.2	368	1.77
22	DP-F08-28	6.11	23.1	332	1.73
23	DP-F11-11	5.35	19.5	366	5.26
24	DP-F11-15	5.00	22.8	547	3.64
25	DP-F11-18	5.02	23.1	497	2.48

	Sample Identification	рН	Temperature (°C)	Specific Conductance (µS)	Dissolved Oxygen (mg/L)
26	DP-F11-21	5.02	22.7	458	2.10
27	DP-F11-24	5.00	22.9	475	1.15
28	DP-F11-27	5.19	23.3	297	0.82
29	DP-F15-14	5.10	21.5	408.6	1.11
30	DP-F15-20	4.9	22.1	649	0.62
31	DP-F15-26	4.9	21.8	290.8	0.52
32	DP-G07-13			Dry	
33	DP-G07-15	5.53	21.4	271	3.33
34	DP-G07-17	5.36	21.9	312	2.19
35	DP-G07-21	5.37	22.9	343	1.66
36	DP-G07-24	5.26	22.9	300	1.13
37	DP-G07-27	5.19	22.5	293	1.37
38	DP-G12-15	4.7	22.3	508	0.89
39	DP-G12-21	4.9	22.7	636	0.99
40	DP-G12-27	4.7	23.1	509	0.45
41	DP-I06-14	5.25	20.4	240	1.66
42	DP-106-20	5.03	21.4	367	1.80
43	DP-106-26	5.01	21.3	302	2.36
44	PZ17-I15-26	5.7	22.1	294.1	0.52
45	DP-J09-14	4.5	21.9	232.1	3.29
46	DP-J09-20	4.9	23.2	338.1	1.57
47	DP-J09-26	4.9	23.0	298.2	2.51
48	DP-J12-15	4.8	22.1	287.5	1.50
49	DP-J12-20	5.0	22.9	342.9	1.13
50	DP-J12-27	4.8	22.6	307.1	1.14
51	DP-M07-15	4.8	22.2	304	0.80
52	DP-M07-21	4.9	22.5	374.9	0.58
53	DP-M07-27	4.8	22.5	301.5	0.49
54	DP-N12-14	5.0	22.1	163.4	1.28
55	DP-N12-21	4.9	22.3	304.1	1.91
56	DP-N12-27	5.0	21.6	331.6	2.45
57	DP-O10-12	4.3	21.1	186.4	1.31
58	DP-O10-18	4.8	22.2	298.6	0.77

Appendix C December 2010

	Sample Identification	рН	Temperature (°C)	Specific Conductance (μS)	Dissolved Oxygen (mg/L)
59	DP-O10-24	4.2	21.8	182.2	0.44
60	DP-Q15-15	4.7	20.7	303.4	2.31
61	DP-Q15-21	5.0	22.6	323.6	1.44
62	DP-Q15-26	5.1	21.5	324	0.96
63	Field Blank - DI	5.71	12.1	1.49	9.44
64	Field Blank - TAP	6.97	9.6	445	11.07
65	Equipment Rinsate	7.2	11.9	13.2	2.31



### **Appendix D: Chain of Custody Forms**

SAL Project No. 100300 F

# SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL. 34677 813-855-1844 fax 813-855-2218

								Con	Contact / Phone:					
Client Name	;	(						Jose	Josephin Edeback-Hirst		813-630-4498	4498		
	Hazan ar	Hazan and Sawyer						jedel	jedeback@hazanandsawyer.com	nandsawy	/er.com			
Project Name / Location		Mound Group	CODEC Mound Groundwater Analyses	Ses										
Samplers; (Stanature)								() () ()	( ( 1	OLTOROGO	Z			
Harry Wool							PARA	PARAMETER / CONTAINER DESCRIPTION	AINEK	SCRIP 116	<u> </u>			
Matrix Codes: DW-Drinking Water WW-Wastewater SW-SurfaceWater SL-Sludge SO-Soil GW-Groundwater SA-Saline Water O-Other R-Reagent Water	stewater SO-Soil ter O-Other											,	14,01, 0101;04	tainers (Total
		əte	əmi	xirteN	Somposite Grab	ILP, Cool	TKN' NH³' N 520 WI b' H	40 ml aV, H TOC 1LaG, Cool	DOC	Hq bləif	Field DO	Field Conc		No. of Con per each lo
Sample Description		a (%)	1320	W.S					72	<u>ن</u> ر	84	378c		
7 3		21/2-1-	0755	CW GW	×	-	-		4.	9 1.		318.7		
10000000000000000000000000000000000000			2180	M9	×				2	90		29.2.4		
00000			1880	GW	×	-	-		7	6	_	8.160	_	$\overline{}$
7. 7. 8 00			1853	ВW	×	-	-		2,	2	2.31	325.2		
			2000	GW	×	-	-		2	0	77	323.6		
			8933	GW	×	-	1		7	4		324.0		1
20.4			Shou	GW	×		-		7	62	1.31 1	186.4		
			3.46(1	QW.	×	_			χ'	8	0.77	398, 4		
( , 0)			10/01	GW GW	×	-	-		14	2	0.44	182.2		1
- 21/00			10.26	GW	×	-	1		5.	6	1.28	163.4		
20100		<b>\</b>	10:52	- GW	×	-	-		7	8	16.	3.hos		
ished:	Date/Time:/200	Received:	Wood		Date/Times	2/2	Seal intact? Samples int	Seal intact? Samples intact upon arrival?	Z Z >> C18		structions	Instructions / Remarks		
Reimquished:	Date/Tipie/LO	Received:			Date/Time:		Received orfice?	orfice? Temp_	2 (2)	Ψ Z Z				
Relinque ded:	Date/Time:	Received:			Date/Time:		Proper pr Rec'd wit	Proper preservatives indicated? Rec'd within holding time?	BD	∀ ∀ Z Z z z				
Relinquished:	Date/Time:	Received:			Date/Time		Volatiles Proper co	Volatiles rec'd w /out headspace Proper containers used?		(2) > /(				
Relinquished:	Date/Time:	Received:			Date/Time:				٤	∀ Z Z				
Chain of Custody xls										Chain	Chain of Custody	dy		

SAL Project No. 100300 7

# SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

	Hazan e	Hazan and Sawyer							Josephin Edebad	Josephin Edeback-Hirst	st 813-630-4498	0-4498	
Project Name / Location									edeback@	iedeback@hazanandsawyer.com	awyer.con		
	GCREC	Mound Gro	GCREC Mound Groundwater Analyses	lyses					-	-			
Samplers: (Signature)	p.m.		***************************************				PAR₽	PARAMETER / CONTAINER DESCRIPTION	CONTAINE	R DESCRI	NOIL		
Matrix Codes: DW-Drinking Water WW-Wastewater SW-SurfaceWater SL-Sludge SO-Soil GW-Groundwater SA-Saline Water O-Other R-Reagent Water	Wastewater ige SO-Soil Water O-Other						*O						
SAL Use Only Sample No.	ription	Ðate	əmiT	xirtsM	Composite Grab	1LP, Cool Alkalinity	220 ш Ь' Н <sup>2</sup> 2	40 ml aV, HCI TOC	11aG, Cool	Hq bləi7	Od bleif	bnoO blei∃	
24 DP-MO7-15		01/6/61	1/32	GW.		-	-				08.0	304.0	
# DPM07-31			1147	GW	×	<b>,</b>	ν-			4.9	@ 5° 8		
48 pp-M07-27.			1307	GW	×	ζ-	<b>,</b>			ر ج د	0.49	3/.5	
4300-513-15			1228	GW	×	-	<b>4</b>			3.	1.50	287.5	
1-00- J12-20	, a		1239	GW	×	Ţ~	<del>,</del>			2.0	1.13	372.9	
7-3-40 P	of other		hhe	GW	*					5:0	123	173 342.6	
15 DP- 5-12 -27	۷ ۲		0001	GW	×	-	7-			4.8	61.1	307.1	
40 00-500-14			1320	GW	×	<del>,-</del>				4.57	229	232.1	
1 DP-5-09 20			1336.	GW	×	<del></del>	<b>τ</b>			4.9		1388	
42-08- J-09 26		<b>~</b>	という	GW	×	<del>-</del>	<b>,</b>			4.9	2.51	28.2	
				GW	×	-	,-						
				GW	×	-	<b>,</b> -						
Containers Propared/ Relinquished:	Date/Time; 1200	Received:	2 6	6	Date/Time:	F/10	Seal intact? Samples int	Seal intact? Samples intact upon arrival?	ríval?	Z A	Instruction	Instructions / Remarks	
Relinquished:  Long My	Date/Time: 1.0	Received:			Date/Time:		Received	Received on ice? Temp	) . 				
Relinquished:	Date/Time:	Received:			Date/Time	.e:	Proper pr Rec'd with	Proper preservatives indicated? Rec'd within holding time?	ndicated? (	AN AN Z			
Refriquished:	Date/Time:	Received:			Date/Time:	: : :	Volatiles	Volatiles rec'd w /out headspace	dspac∈	Z Z			
Relinquished:	Date/Time;	Received:			Date/Time:	.e.		Tropel containers used	<u>ن</u>	y Z Z			
an et Chalacture											AMPLY .	m - MAT - m + A	
stori or otherwijzhis Rev Dace 11-42-13										Ç	Chain of Custody	dy	

# SOUTHERN ANALYTICAL LABORATORIES, INC. 110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

Client Name	Hazan	Hazan and Sawver						<u> </u>	Contact / Phone: Josephin Edebad	Contact / Phone: Josephin Edeback-Hirst	st 813-630-4498	0-4498		
Project Name / Location									edeback@	hazanands	iedeback@hazanandsawyer.com			
	GCREC	GCREC Mound Groundwater Analyses	ndwater Ana	alyses		***************************************								
Samplers: (Signature)	e. Worl,	/ gorge	this	ن		:	PARA	PARAMETER / CONTAINER DESCRIPTION	ONTAINE	R DESCRI	PTION			
Matrix Codes:  DW-Drinking Water WW-Wastewater SW-SurfaceWater SL-Sludge SO-Soil GW-Groundwater SA-Saline Water O-Other R-Reagent Water	astewater ge SO-Soil /ater O-Other							IC						
Sample Description	ption	Date	əmiT	xirtsM	Composite Grab	1LP, Cool Alkalinity	ՀԷ <b>Ո</b> , NH <sub>3</sub> , N TKN, NH <sub>3</sub> , N	40 ml aV, HC TOC	1LaG, Cool DOC	Hq bləi	Field DO	Field Cond		No. of Conta per each loca
51 DP-012-27		01/6/21	11:14	MĐ	×	-	<b>-</b>	2	_	5.0	2.45	231.6		
PP- D7.5- 14		01/6/23	8:20	M9	×	-	+	2	-	10.4	01.1	432		
69 DP- DO9 - 15		01/6/21	4:30	GW	×	<b>-</b> -	-	2	1	5.30	3,20	433		
14 01-612-62		01/6/21	11:05	MΘ	×	-	-	2	1	2,00	561	H9H		
I _		12/9/10	12:00	МÐ	×	-	-	2	-	6.34	1.77	368		
21 DP - FII - 18		0)/2/11	1:05	M9	×	-	-	2	-	5:0	6.13	3:048		
平12-21		7	1239	M9.	人	_	1	0	1					
							-							
Containers Prepared/ Relinquished:	Date/Time: // US / 1/2 - 8 - 10	Received:	Wad		Date/Type://O	100	Seal intact? Samples int	Seal intact? Samples intact upon arrival?		Y N NIA	Instructior	Y N NA Instructions / Remarks	S	
Relinquished:	Date/Time: 9	Received:			Date/Time:		Received	Received on ice? Temp		N NA				
Relinquished	Date/Tifne:	Received:			Date/Time:		Proper pre Rec'd with	Proper preservatives indicated? Rec'd within holding time?	idicated? ()	d d Z Z Z Z				***************************************
Relinquished:	Date/Time:	Received:			Date/Time:		Volatiles r	Volatiles rec'd w/out headspace		<b>②</b> z				nm.t.
Relinquished:	Date/Time:	Received:			Date/Time:				<u>)</u>	A'N N				
Chain of Custody xls	_									]   	Chair of Chatady	Ì		

SAL Project No. 1003007

# SOUTHERN ANALYTICAL LABORATORIES, INC.

11D BAYVIEW BOULEVARD, OLDSMAR, FL 34677 B13-855-1844 fax 813-855-2218

Client Name	-	(						Conta	Contact / Phone: Josephin Edeback-Hirst 813-630-4498	Hirst 813-6	30-4498		
doitood / Joseph Jesting	Hazan a	Hazan and Sawyer						iedeba	jedeback@hazanandsawyer.com	idsawyer.co	m		
Project Name / Location	GCREC	GCREC Mound Groundwater	ndwater Analyses	/ses									
Samplers: (Signature)	7, 7, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,						PARAMA	PARAMETER / CONTAINER DESCRIPTION	NINER DESC	RIPTION			
A 2	- [				-		-						
Matrix Codes:  DW-Drinking Water WW-Wastewater  SW-SurfaceWater SL-Sludge SO-Soil  GW-Groundwater SA-Saline Water O-Other  R-Reagent Water		0,					×OI						ainers (Total (noits:
		ole ole	อเมเ	xinJeN	Composite Grab	720 ml b' H <sup>3</sup>	LKN' NH³' N	10 ml aV, H0 TOC 12aG, Cool	Field pH	Field DO	Pield Cond		No. of Conta per each loc
No. Sample Description	rtion	17/9	75:0	V M	×				7	2.55	258		d
_		2,6	3h : 8	N.S.	( ×	. ,	-		7.0/	2.0(	29.6%	2	
			50	M.E.	×	-			4.92	5.59	503	7	_}
04 DIL 119 - 8			9:20	GW.	×		-		4.65		086		7
			4:37	GW	×	+-	-		5.30	5.20	43		ぇ
2 4		1/2	4:50	GW	×	-	-		8.78	1.35	300	4	_ 1
-		12/9	10:05	GW	×	-	-		5.97	٦٠٠٠ -	230	4	,
1		12/9	0:01	GW	×	-	-		5.48	4.69	767	R	4
		2	10:50	GW	×		<del></del>		4.88	2,47	055	18	4
		2/9	07:11	GW	×	-	-		5, 17	2.01	297		4
1.88		12/9	Il:dz	GW	×	<b>,</b> -			4.04	6.09	1412		4
				GW	×	<b></b> -	+-						
Containers Prepared:	Date/Time:/200	Received:	· 五		Date/Time: 12-04-10		Seal intact? Samples inta	Seal intact? Samples intact upon arrival?	Z Z Z		Instructions / Remarks		<del></del>
Reinquished:	Date/Time:	Received:	Els.	1	Date/Time: 10	- 2	Received on ice? Temp	ice? Temp	N N N				
> {	Date/Time:) CD	Received:			Date/Time:		Proper prese Rec'd within	Proper preservatives indicated? Rec'd within holding time?	N N N N N N N N N N N N N N N N N N N				
Relinquished:	Date Time:	Received:			Date/Time:		Volatiles rec' Proper conta	Volatiles rec'd wi/out headspace					
Relinquished:	Date/Time:	Received;	· The same of the		Date/Time:				Y N N/A				
Only or Gustaly 209										Chain of Custody	tody		

SAL Project No. 1003207

# SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 B13-855-1844 fex 813-855-2218

Client Name							<u>ૻ</u> <u></u>	Contact / Phone: Josephin Edebac	one: eback-Hirs	Contact / Phone: Josephin Edeback-Hirst 813-630-4498	-4498		
	Hazan and Sawyer						iec	deback@r	edeback@hazanandsawyer.com	awyer.com			
Project Name / Location	GCREC Mound Groundwater	dwater Analyses	Ses				]						
doep there						PARAI	PARAMETER / CONTAINER DESCRIPTION	NTAINER	DESCRIP	TION			
Matrix Codes: DW-Drinking Water WW-Wastewater SW-SurfaceWater SL-Sludge SO-Soil GW-Groundwater SA-Saline Water O-Other R-Reagent Water						XO1 *20°	CI						ainers (Total cation)
SAL Use Only Sample	əlsC	əmiT	xintsM	Composite Grab	1LP, Cool Alkalinity	250 ml Р, H ТКИ, ИН <sub>3</sub> , M	40 ml aV, H TOC	12aG, Cool	Field pH	Pield DO	pnoO bləi국		No. of Conl per each lo
14 NO FOR 12 P	ole) (1	01:11	ME	<b></b>		_			11.9	1.93	332	•	7
	12 (4 (10 11):30	11:30	MS.	×					5.35	5.26	306	•	જ
1 2 60	17/10	12:37	œw Gw	×	-	-			5.00	3.64	£47		7
+-	11/4/10	1:25	GW	×	-	-			2.0.5	2.10	854		4
N - 611-	17/4/10 1:45	Sh:J	GW.	×	\	<b>-</b>			2.00	1.15	ムチナ		H
DP-F11-	01/2/10	2:00	GW	×	-	-			5,19	0.92	447		ಗ
+			ATO	×	*	7							
			JAN C	*	+	4							
			Jan de	×	+	+							
			J. J.	X	*	7							
			B	X	~	¥							
			Š	X	~	×						-	
Containers Prepared: Containers Prepared: (1)	Received:	子が子		Date/Time: 12-04-(P	1-(0	Seal intact? Samples int	Seal intact? Samples intact upon arrival?	-	Z Z Z	nstruction	s / Kemarks		
Relinquished: Date/Time:	Received:	Wal		Date/Time:	3:10	Received	Received on ice? Temp		N/A				
Date/Tiper				Date/Time:	) p	Proper pre Rec'd with	Proper preservatives indicated? Rec'd within holding time?	licated? (Y	N N N				
Refinquished: Date/Time:	Received:	ě		Date/Time:		Volatiles	Volatiles rec'd w/out headspace	odspace y					
Relinquished: Date/Time:	Received:			Date/Time:		Рюрет со	Proper containers used?	<u>ک</u>	N N/A				
Oner or Oustralasts		THE REAL PROPERTY AND ADDRESS OF THE PARTY AND							Cha	Chain of Custody	dy		

SAL Project No. 100300 7

SOUTHERN ANALYTICAL LABORATORIES, INC.

a de 110 BAYVIEW BOULEVARD, DLDSMAR, FL. 34677 B13-855-1844 fax 813-855-2218

110 BAYVIEW BOULEVARD, OLDSMARI, FL 34677 81	813-855-1844 tax 810,000 Etc.	*			Cor	Contact / Phone	ck-Hirst	813-630-4498	1498	
Clent Name					200	Con IIII Ido		0.00		
	Hazan and Sawyer				Tied	jedeback(@hazanandsawyer.com	anandsaw	ver com		
Project Name / Location	GCREC Mound Groundwater Analyses	alyses								
7	, , ,			PARAN	PARAMETER / CONTAINER DESCRIPTION	LTAINER D	ESCRIPTIC	NC		
The line	n m									lei
Matrix Codes: DAY, Drinking Water WW-Wastewater										
SW-SurfaceWater SL-Sludge SO-Soil				×( O <sup>‡</sup> O						nənin
GW-Groundwater SA-Salifie Water R-Reagent Water				³' NC H <sup>s</sup> 2	. нс	loc			puc	ejuo(
SAL	<u></u>		osite Cool	,9 ln HN		3' C	Hq b	d D	o pi	 O 10 .
Use	əu. Əl	atrix	rsp	LKN' 520 <sup>1</sup>	40 m TOC	000 1190	Fiel	l9i7	ьiЭ	οN
Sample Sample Description	eO .	1	0			5.	1 57.5	1.66	व्रत्	લ
NP- IO	12 16 16 7:10	GW	×	-	-	8	-	1.80	367	त्थ
- (	12/10/10/21	GW	,- ×			'	$\dagger$	+	44	3
	into to 7:55	MS CM	×	-		5	+	╁	- 1	١,
	1	-	>	·		9	11 46.9	_	443	7
	- 1	-		,		5	5.53 3.	3.33	346	જ
51 = 250 -04 60	12/10/10 8:25	GW	×			7	<del>                                     </del>	2.19	312	7
	St = 8 0/01/21	GW	×	-		1	+-	1	302	R
Nr. 60 f	12/10/10 8:50	ВW	×	-		0	十	1	77.	<b>\</b>
31 00-607- 21	00:6	-	×			2	5.26 6.	(-13	100	4
32 00-607-24	17 10/10		;;;;	-		<u>~</u>	5.19 1.	1.37	293	4
33 DP-607-27		-	< ?						1233	3
CA STE- EX Pung Tame	12/0/00 4.34	GW		-		(*		0,10	SEM!	g
	14/0-[0]	GW	×	-				+	1,861	
	11/0/10 0652	GW	- X	-		2)		structions	nstructions / Remarks	
Containers Prepared Date Time / APC	Received:	9	Date/Time (1)	Seal intact?	Seal intact? Samples intact upon arrival?		) §			
Relinquished: (1) 12-08-10	S	3	Date/Time:				9 2			
Relinquished:	Received			Receve	Received on Ide ( 1450).	)				
La Word LIFE	Received:		Date/Time:	Proper p	Proper preservatives indicated? pactd within holding time?	idicated? (Y.)	S SZ			
Keinglister			Date/Time:		)	) ?	Ĝ			
Relinquished:	Received:			Volatile	Volatiles recid wrout meausplads Proper containers used?	<sup>1</sup> ( )				
Relenquished: Date/Time:	Received:		Date/Time:			)		ı		
							Chain	Chain of Custody	· .\s	

Chair of Custody 2% Rev.Date, 11 1641

SAL Project No. 100300 7

SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fex 813-855-2218

									Orogan / Phone					
Client Name								sol s	Josephin Edeback-Hirst	oack-Hirst	813-630-4498	-4498	1	
	Hazan a	Hazan and Sawyer						jede	jedeback@hazanandsawyer.com	zanandsav	wyer.com			-
Project Name / Location		Mound Gro	GCBEC Mound Groundwater Analyses	vses										
Samplers: (Signature)	) CONTRACTOR								( ( :		Ž			
7	Jan Co						PARAME	TER / CCN	PARAMETER / CONTAINER DESCRIPTION	ESCRET	2			
Matrix Codes:  DW-Drinking Water WW-Wastewater SW-SurfaceWater SL-Sludge SO-Soil GW-Groundwater SA-Saline Water O-Other R-Reagent Water	sstewater e SO-Soil ater O-Other						XON					Ollege)		ltainers (Total (noitsoo
Santle	r (j	ejse)	əmiT	xintsM	Composite Grab	1LP, Cool Alkalinity	250 ml P, F	40 ml aV, F TOC	1126, Coo	Field pH	Lield DO	Field Con		No. of Cor per each l
7 2 .		01/01/11	0	GW	×	-	-		5	5.1	<u> </u>	408.6		
5		-	0770	ВW	×	-	-	4	4	5.		646		
7.7			1418	МЭ	×	-	-		1	0 5%		3.066		
			0836	МЭ	×	-	-		7	4.7 6	T	508		
700			25%0	В	×	-	-		4	4.7 6		508		
20 19 - 61 75			2560	В	×	-	1		4	4.9	0.99	636		
		7	1001	GW	×		-		2	4.7 6	0.45	502		
7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7		~	2480	GW	×	-	-		7	الم 2	15.	13.2		
\$100 A 1				PAG	¥	7	+							
				AND	X	+	+		_					
				Ma	k	+	+	_						
				SE .	k	4	+					7		
Containers Prepared/ Relinquished:	Date/Time:	Received:	1 W	1	Date/Time	63	Seal intact? Samples intact upon arrival?	ct upon arriv		4	struction	Instructions / Remarks	Š.	
Relinquished:	Date/Time: 1.2/10/10	Received:			Date/Time		Received on ice? Temp	ice? Temp_		 Ž				
Relinguished:	Date/Time:	Received:			Date/Time:		Proper preservatives indicated? Rec'd within holding time?	rvatives indi holding time'	ردلا	▼ ₹ Ž Ž				<del>*</del> *
Relinquished:	Date/Time:	Received:			Date/Time		Volatiles rec'd w/out headspace	'd w /out hea iners used?		(*) * (				
Relinquished:	Date/Time:	Received:			Date/Time		-		,—	▼ Ž Z >				
Chain of Custody xis										Chai	Chain of Custody	ybo		]

S.

Chain of Custody.xls Rev.Date 11/19/01

SAL Project No. 12307

SOUTHERN ANALYTICAL LABORATORIES, INC.

110 BAYYIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 fax 813-855-2218

Client Name		,						Ö	Contact / Phone	one.				
	Hazan	Hazan and Sawyer						ဂ	sephin Ec	Josephin Edeback-Hirst	st 813-630-4498	-4498		
Project Name / Location								je.	teback@	azanands	jedeback@hazanandsawyer.com			
	GCREC	GCREC Mound Groundwater Analyses	undwater Ana	lyses		-								
Samplers: (Signature) Church	7	y War	h				PARAME	PARAMETER / CONTAINER DESCRIPTION	NTAINER	DESCRIP	HION			
Matrix Codes:  DW-Drinking Water WW-Wastewater SW-SurfaceWater SL-Sludge SO-Soil GW-Groundwater SA-Saline Water O-Other R-Reagent Water	Vastewater ge SO-Soil Vater O-Other						×ON '8	HCI	loc			рі		ntainers (Total
	iption	Date	əmiT	xinteM	Composi	Alkalinity	ТКИ, ИН	Ve Im 04 TOC	11.aG, Cd	Field pH	Field DO	Field Cor		No. of Co
16-T06-		12/10/10	Sh:E	GW	×			2	-	5.01	2.36	302		لم
36 DF-A5-20		14/0/10 07/E	3//6	QW.	*			α <sup>2</sup>		1.9	29.0	649	Samoled	2
70 PZ 24- BIC6-26	76		082)	GW	×		-	2	<del></del>		01.70		-	
69 PZ O4 - 8KG - 9	-		06.40	GW.	×			2		27	72.9	01.1		
4/PZ 17-115-26	e	>	21160	SW GW	×		·	2		5.7	250	1.450		
DR-11-80	Ф		0	F	*	+	+	þ	+					
64 DD- FIS- 20D		01/01/61	0720	36	X	_	_			4.4	B. 42	643		
Containers Prepared: Relinquished:	Date/Time: // US	Received:	Wal		03/8/61		Seal intact? Samples intac	Seal intact? Samples intact upon arrival?		Z	nstruction	Instructions / Remarks		
Relinquished: Key Wal	Date/Time: / (0)	Received.			Date/Time:		Received on ice? Temp	ice? Temp_	) (S) (	) Ø (				
Relinquished:	Date:Time:	Received:			Date/Time:	E K	roper presel ec'd within l	Poper preservatives indicated? Rec'd within holding time?	$\sim$	99 § §				
Relinquished:	DateTime	Received:			Date/Time:	> =	Volatiles rec'd w fout hea Power containers used?	Volatiles rec'd w/out headspace		z > (				
Relinquished:	Date/Time:	Received:			Date/Time:			) ) ) )	<b>⊘</b>	N NA				
Discosit Cardana da														

Ote a of Cyrlody 45 Roy Date 11:186.1

Chain of Custody

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

### **GROUNDWATER SAMPLING LOG**

			GF	ROUNDV	VATER	SAMPLI	NG LOC	<u> </u>			
Client Name:	ŀ	lazan and Sawye	er	Location:				Contact: Phone:			
Date Sampled	12.1	9/10		SAL Project #	100	3007		Project Name	GCREC Mo	und Groundwa	ater Analyses
Well Number	610 119	- i:U		Sample ID	01			GPS LAT GPS LONG			
	DULKI	- 17		Р	URGINO	3 DATA		GF3 LONG			
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft) REFERENCE		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet) TUBING		PURGE PUMP CODE TUBING	PP GP IBP
TOTAL WELL DEPTH (Feet)		ELEVATION (NGVD)		ELEV (REFEREN	ATION CE-STATIC)			DIAMETER (Inches)		CAPACITY (gal/ft)	
		bmerged Screen TAL DEPTH - ST				IEQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	(10		1/4 WELL VOLUME			3 WELL VOLUMES			5 WELL VOLUMES		
		EQUIPMENT V	OLUME = PUN	IP VOLUME +	· (TUBING CA	PACITY X TUI	BING LEGNTH	) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBI IN WELL				NG LEGNTH L (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID	$\times$	$\times$	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55- —	SAL-SAM- 0	$\geq$	
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
0745					5-1	210	281.9	0,89			
		Capacity (gallons/f								"5.88	0.040
TUBI	NG INSIDE DIA	A. CAPACITY (Ga	al./Ft.): 1/8" =			/4" = 0.0026; G DATA		1; 3/8" = 0.00	6; 1/2" = 0.	010; 5/8" =	0.016
CAMPLED D	//COMPANY	I'		3/	AWPLIN		LER(S)			<del></del>	
	INT)			<u></u>		1	TURES:				
TUBING MAT (CIRCL	ERIAL CODE E ONE)	PP PE N	P TL TT		TUBING WELL (FEET)			SAMPLE PU RATE (n			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	YN	CLEANING STEPS	FOTED BY	T	I SEMILYOLS	COLLECTED	ı
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	YN		ECTED BY E FLOW?	Y N N/A		SH TRAP?	Y N N/A
	RVATION IN FIELD?	Y N N/A		ERVATIVES DED					,		
WEA <sup>-</sup> CONDI	THER ITIONS										
СОММ	MENTS										
	30110	PUMP CO	DES: PP=Per	ristaltic Pump,	GP= Submers	sible Grundfos	Pump, IBP= In	-place Bladder	Pump	flon	
Re	eviewed By:		OUDES. FF=	· orypropylene	, i L- Folyeti	Tylerie, IVF - IV	Date:				

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

			-		*		NG LOC	344 / 200			
Client Name:		Hazan and Sawy	er	Location:				Contact: Phone:			
Date Sampled	DP.	apg - 17	2,	SAL Project #	100	3007	_	Project Name	GCREC Mou	ınd Groundwa	iter Analyses
Well Number	12	19/10		Sample ID	02			GPS LAT GPS LONG			
		1 /		Р	URGING	DATA					
WELL		WELL		Screen				Static Depth		PURGE	PP GP
DIAMETER (inches)		CAPACITY (gal/ft)		Interval (Feet)	UNK	То	UNK	to Water (Feet)		PUMP CODE	IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		GROUNE ELEV (REFEREN	ATION			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		ubmerged Screen				EQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
	OLUME = (TO	OTAL DEPTH - S	· · · · · · · · · · · · · · · · · · ·	x WELL CAPI	CITY =	0.14/51.1	<u> </u>		- EMELL		
ONE WELL VOLUME		EQUIPMENT V	1/4 WELL VOLUME	AD VOLUME	(TUDING CAL	3 WELL VOLUMES	DINC LECNIL	V + ELOW CEL	5 WELL VOLUMES		
		EQUIPMENT	T	AP VOLUME +	(TUBING CAI		SING LEGINTE	1) + FLOW CEL			W-1
PUMP VOLUME	1		TUBING LEGNTH	l		FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBII IN WELL			B	NG LEGNTH L (FEET)		PURGE TIME START	:	PURGE TIME END		TOTAL PURGED	_
INST. ID	$\times$		$\searrow$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55- —	SAL-SAM- 0	><	><
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
6755	1,5				4.9	23.3	318.7	1104			
		Capacity (gallons								"5.88 010: 5/8" =	0.016
TUBII	NG INSIDE D	IA. CAPACITY (G	Sal./Ft.): 1/8" =				5/16" = 0.00	4; 3/0 - 0.00	00, 1/2 - 0.	010, 3/0 -	0.010
				<u>S</u>	AMPLIN	IG DATA		T	<u>.</u>		
SAMPLED BY (PR	Y / COMPAN'	Y		-			PLER(S) ATURES:			T	<u></u>
TUBING MAT (CIRCL	TERIAL CODI LE ONE)	PP PE 1	NP TL TT	_	E TUBING WELL (FEET)	)			UMP FLOW mL/min) 		
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Y N	CLEANING STEPS			1		
FIELD FILTERED?	Y N	FILTER SIZE (μm)		DUPLICATE	YN		LECTED BY SE FLOW?	Y N N/A		COLLECTED GH TRAP?	Y N N/A
	RVATION O IN FIELD?	Y N N/A		SERVATIVES DDED							
	THER DITIONS										
COM	MENTS						D 10D	In along Diodd	Pump		
		PUMP C JBING MATERIAI	ODES: PP=Pe	eristaltic Pump	, GP= Submer	sible Grundfos	s Pump, IBP= I Non-inert Plact	In-place Bladde tic. TL= Teflon	r Pump Lined. TT= Te	eflon	
	Reviewed B		LOUDES: PP	- r orypropylen	o, i == i olyei	,	Date				
	CAICMEN D	<u>y.</u>									

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

			GF	OUND	VATER	SAMPLI	ING LOC	3			
Client Name:	ŀ	Hazan and Sawye	r .	Location:				Contact: Phone:			
Date Sampled	EA	9-2-	7	SAL Project	100	3007	-	Project Name	GCREC Moi	und Groundwa	ater Analyses
Well Number				Sample ID	03			GPS LAT GPS LONG			
				P	URGINO	DATA					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		GROUNI ELEV	L D WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		bmerged Screen TAL DEPTH - ST				EQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL V	OLOME = (10	MAL DEPTH - ST	1/4 WELL VOLUME	X WELL CAP	ICH T =	3 WELL VOLUMES			5 WELL VOLUMES		
		EQUIPMENT V	DLUME = PUM	IP VOLUME +	· (TUBING CAI	PACITY X TUI	BING LEGNTH	I) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME		: 	EQUIPMEN T VOLUME		
INITIAL TUBI IN WELL			FINAL TUBII IN WELL			PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID	$\times$	$\times$	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55- —	SAL-SAM-	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (οC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
0812					4.8	22.7	293,2	0.84		_	
								•			
		Capacity (gallons/	,							"5.88	0.040
TUBI	NG INSIDE DIA	A. CAPACITY (Ga	al./Ft.): 1/8" =				5/16" = 0.004	4; 3/8" = 0.00	6; 1/2" = 0.0	010; 5/8" =	0.016
			-	<u> </u>	AMPLIN		PLER(S)				
SAMPLED BY (PR	( / COMPANY INT)			Т			TURES:			Γ	
TUBING MAT (CIRCL	ERIAL CODE E ONE)	PP PE NI	P TL TT		E TUBING WELL (FEET)			SAMPLE PL RATE (r			
SAMPLING INITIATED		SAMPLING ENDED FILTER SIZE		FIELD CLEANED	Y N	CLEANING STEPS	LECTED BY	i	TSEMI-VOLS	COLLECTED	
FIELD FILTERED?	Y N RVATION	(μm)	LIST PRES	DUPLICATE ERVATIVES	Y N		SE FLOW?	Y N N/A		SH TRAP?	Y N N/A
	IN FIELD?	Y N N/A		DED	<u> </u>					_	
	THER ITIONS										,
COMN	MENTS										
		PUMP CC	DES: PP=Pe	ristaltic Pump,	GP= Submers	sible Grundfos	Pump, IBP= ir	n-place Bladder	Pump	0	
	TUE	BING MATERIAL	CODES: PP=	Polypropylene	e, PE= Polyetl	nylene, NP= N	Non-inert Plasti		ined, TT= Te	tion	

Date:

SOUTHERN ANALYTICAL LABORATORIES, INC. 110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

			GR	OUNDV	VATER S	SAMPLI	NG LOG	;			
Client Name:	H	azan and Sawyer		Location:				Contact:			
ate Sampled	12 9 10	<u> </u>		SAL Project	10030	007.	DU	Phone: Project Name	GCREC Mou	ınd Groundwa	ter Analyses
Vell Number	1 . 1	<del></del>		Sample ID	10030 DP-D7.	5 - IV	<u> </u>	GPS LAT			
				P	URGING	DATA		GPS LONG			
WELL		WELL		Screen	OKONO	DAIA		Static Depth	1	PURGE	
DIAMETER (Inches)	5/16	CAPACITY (gal/ft)		Interval (Feet)	UNK	То	UNK	to Water (Feet)		PUMP CODE	PP GP IBP
OTAL WELL EPTH (Feet)	14	REFERENCE ELEVATION (NGVD)		ELEV	WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)	5/16	TUBING CAPACITY (gal/ft)	
Purge Tech	nnique: q Sub	omerged Screen (	1,1/4,1/4 Well		rged Screen (1	EQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL T	DLUME = (TO	TAL DEPTH - ST	1/4 WELL	X WELL CAP	CITY =	3 WELL	T		5 WELL		<u> </u>
VOLUME VOLUME			VOLUME			VOLUMES			VOLUMES		
		EQUIPMENT VO	DLUME = PUM	IP VOLUME +	(TUBING CA	PACITY X TUE	BING LEGNTH	l) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBII IN WELL				NG LEGNTH L (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST.	X	$\times$	X	X	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	><	$\geq$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe
8:20 am	1	3			7.01	21.2	432	1.10			
	Well	Capacity (gallons	(foot): 0.75"=0	0.02, 1.25"=						2"5.88	0.016
TUBI	NG INSIDE DI	A. CAPACITY (G	al./Ft.): 1/8" =		SAMPLIN		5/16" = 0.00	J4, 3/6 - 0.0	00, 172 - 0	.010, 0.0	
SAMPLED B	Y / COMPANY	Mad. 1	Harce of			SAMI	PLER(S)	ande	is this	1	, , , , , , , , , , , , , , , , , , ,
TUBING MA	RINT) TERIAL CODE	.†	IP TL TT	SAMPL	E TUBING WELL (FEET		ATURES:	SAMPLE F	PUMP FLOW (mL/min)		<del></del>
(CIRCI	LE ONE)	SAMPLING	8;	FIELD	YN	CLEANING	3		<del>`</del>		
INITIATED FIELD	V .(0	ENDED FILTER SIZE		DUPLICAT	<u>}</u>		LLECTED BY	Y N N/A		S COLLECTE JGH TRAP?	DYNI
FILTERED?	RVATION	(μm) Υ Ν Ν/Α		SERVATIVES		] REVER	RSE FLOW?		TTIKO	701111011	
CHECKE	D IN FIELD?	<del></del>	A	DDED							
	ATHER DITIONS	cold									
COM	IMENTS										
		PUMP C JBING MATERIA	ODES: PP=F	Peristaltic Pum	np, GP= Subme	ersible Grundfo	os Pump, IBP=	In-place Blado	ler Pump n Lined TT=	Teflon	
		IDINIO MATERIA	CODES DE	- Polypropyle	ne PF= Poly	ethviene. NP=	= Non-Inert Pla	1511C, IL- 1611C	.,		

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

		EW BOULE					NG LOG				
Client Name:	F	lazan and Sawye	r	Location:				Contact: Phone:			
Date Sampled	12/9/	lb		SAL Project	10030	007-	05	Project Name	GCREC Moi	und Groundwa	ater Analyses
Well Number		7.5-20		# Sample ID	DP-13	1.5-20	0.5	GPS LAT			
	Ut V			P	URGING			GPS LONG			
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)	20	REFERENCE ELEVATION (NGVD)		GROUNE ELEV	WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)	5/16"	TUBING CAPACITY (gal/ft)	
		bmerged Screen ( TAL DEPTH - ST			rged Screen (1	EQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	<u> </u>		1/4 WELL VOLUME			3 WELL VOLUMES			5 WELL VOLUMES		
	ſ	EQUIPMENT VO	DLUME = PUN	1P VOLUME +	(TUBING CAF	PACITY X TU	BING LEGNTH	I) + FLOW CEL			
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBI IN WELL				NG LEGNTH _ (FEET)		PURGE TIME START	- -	PURGE TIME END		TOTAL PURGED	
INST. ID	$\times$				SAL-SAM-63-	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55- —	SAL-SAM- 0	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
9:35	1.5		3.5		7.01	22.2	258	2.55			
					0,00	16 01 0 03	7. 4"=0.65,	5"=1.02,	6"=1.47, 12	2"5.88	
TUBI		Capacity (gallons/ A. CAPACITY (G					5/16" = 0.00				0.016
		······			AMPLIN		4				
	Y / COMPANY RINT)	Joseph	n Hint	<u>ا</u>			PLER(S) ATURES:	gerb	c Him	L	
	TERIAL CODE LE ONE)	PP PE N	P TL TT		E TUBING WELL (FEET)	)			UMP FLOW mL/min)		3000 C 100 C
SAMPLING INITIATED		SAMPLING ENDED FILTER SIZE		FIELD CLEANED	Y N	CLEANING STEPS	LECTED BY	T	SEMI-VOLS	S COLLECTE	
FIELD FILTERED?	Y N RVATION	(μm)	LIST PRES	DUPLICATE	YN		SE FLOW?	Y N N/A	THROU	GH TRAP?	Y N N/A
	D IN FIELD?	Y N N/A		DDED							
1	THER DITIONS										
СОМ	MENTS							- الحام المام	Pump		
	TI	PUMP CO BING MATERIAL	ODES: PP=Pe	eristaltic Pump	, GP= Submer	sible Grundfo	s Pump, IBP= Non-inert Plas	In-place Bladde tic, TL= Teflon	Lined, TT= T	eflon	
<del></del>	Peviewed By		. JODEO, 1 F	. c.ypi opyici	,	j - 1-1 111	Date				

# SOUTHERN ANALYTICAL LABORATORIES, INC. 110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

### **GROUNDWATER SAMPLING LOG**

Client Name:	Hazan and Sawyer	Location:		Contact:	
0				Phone:	
Date Sampled	12/9/10	SAL Project #	1003007-06	Project Name	GCREC Mound Groundwater Analyses
Well Number		Sample ID	·DP-07.5-26	GPS LAT	
		Campic ID	VY - V 7 1 5 - 26	GPS LONG	
		D	LIDCING DATA		

				P	URGIN	G DATA					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEV (REFEREN	O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)	5/16	TUBING CAPACITY (gal/ft)	
Purge Tec	hnique: q Su	bmerged Screen TAL DEPTH - ST	(1,1/4,1/4 Well	) q Subme	rged Screen (*	IEQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scre	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	OEOIVIE = (TO		1/4 WELL VOLUME			3 WELL VOLUMES			5 WELL VOLUMES		
		EQUIPMENT V	DLUME = PUN	IP VOLUME +	(TUBING CA	PACITY X TUI	BING LEGNTH	l) + FLOW CEL	L VOLUME		
PUMP VOLUME	-		TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBII IN WELL			FINAL TUBII IN WELL			PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID	$\times$	><	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM-	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
8:46	2				7.01	al. 3	2 95	2.01			
				•=							
		apacity (gallons/fi				-,,				5.88	
TUBIN	G INSIDE DIA	. CAPACITY (Ga	l./Ft.): 1/8" = 0	0.0006; 3/16"	= 0.0014; 1/	4" = 0.0026;	5/16" = 0.004	3/8" = 0.006	6; 1/2" = 0.0	5/8" = 0	0.016

				SA	<b>AMF</b>	LIN	G DATA	<b>\</b>					
SAMPLED BY (PRI		Josefi	. His-	+				LER(S) TURES:	gester	> Har	1		
TUBING MATE (CIRCLE		PP PE NP	TL TT	SAMPLE LEGNTH IN \	-	_			SAMPLE PL RATE (n	IMP FLOW			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Υ	N	CLEANING STEPS		· · · · · · · · · · · · · · · · · · ·				
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	Υ	N	ŀ	ECTED BY E FLOW?	Y N N/A	SEMI-VOLS ( THROUG		Y N N	I/A
PRESER' CHECKED		Y N N/A		ERVATIVES DED							-		
WEAT CONDI													
СОММ	ENTS											,	
									-place Bladder				_
		NG MATERIAL C	ODES: PP=	Polypropylene,	PE=	Polyeth	ylene, NP= N			ned, TT= Tefl	on		
Re	viewed By:							Date:			_		

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### **GROUNDWATER SAMPLING LOG**

				Contact:	
Client Name:	Hazan and Sawyer	Location:	1	Phone:	
Date Sampled	12/9/10	SAL Project #	100307-07	Project Name	GCREC Mound Groundwater Analyses
Well Number		Sample ID	DP-D09-6	GPS LAT	
Well (Valliber		Cample 1B	V1-00-7 4	GPS LONG	
		Р	URGING DATA		

WELL DIAMETER (Inches)		WELL									
(inches) [		CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		GROUND ELEVA (REFERENC	ATION			TUBING DIAMETER (Inches)	\\4"	TUBING CAPACITY (gal/ft)	
		bmerged Screen (				EQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
	OLUME = (TO	TAL DEPTH - ST.		x WELL CAPI	CITY =	0.14/51.1			5 WELL		
ONE WELL VOLUME			1/4 WELL VOLUME			3 WELL VOLUMES			VOLUMES		
		EQUIPMENT VO	DLUME = PUM	IP VOLUME +	(TUBING CA	PACITY X TUE	BING LEGNTH	) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBI IN WELL			FINAL TUBII IN WELI			PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID	$\times$	$\times$	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55- —	SAL-SAM- 0	$\geq$	$\geq$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
9:05	0.5				7-01-	17.0	363	5.59			
	Well (	L Capacity (gallons/f	oot): 0.75"=0	02. 1.25"=0	0.06, 2"=0.1	16. 3"=0.37	. 4"=0.65,	5"=1.02, 6	<u>                                     </u>	'5.88	
TUBI		A. CAPACITY (Ga				-,	5/16" = 0.004	4; 3/8" = 0.00	6; 1/2" = 0.	010; 5/8" =	0.016

				J.	41A1L	- LIIA	GDAIA						
SAMPLED BY (PRII		Joke	m Itins	r			SAMPL SIGNAT		Josep	i thi	بت بت		
TUBING MATE		PP PË NF	TL TT	SAMPLE LEGNTH IN V	-				SAMPLE PU RATE (n				
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Y	N	CLEANING STEPS					-	
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	Y	N	VOC COLL REVERSI	_	Y N N/A		COLLECTED , 3H TRAP?	Y N	N/A
PRESER' CHECKED		Y N N/A		ERVATIVES DED								· -	
WEAT CONDI										,			
СОММ	ENTS												
		PUMP CO	DES: PP=Pe	ristaltic Pump,	GP= S	Submers	ible Grundfos I	Pump, IBP= Ir	ı-place Bladder	Pump			
	TUB	ING MATERIAL (	CODES: PP=	Polypropylene	, PE=	Polyeth	ylene, NP= N			ined, TT= Te	flon		
Re	viewed By:							Date:					

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		EVV BOOLI					ING LO			- LL 1 U	
Client Name:		Hazan and Sawye	er	Location:				Contact: Phone:			
Date Sampled	12/0	1/10		SAL Project	1002	3007 -	-08	Project Name	GCREC Mo	und Groundwa	ater Analyses
Well Number		110		# Sample ID	NP D	01-8	00	GPS LAT			
	<u> </u>			<u> </u>	URGINO	<u> </u>		GPS LONG			
WELL		WELL		Screen	UKO II K	DAIA		Static Depth		PURGE	·
DIAMETER (Inches)		CAPACITY (gal/ft)		Interval (Feet)	UNK	То	UNK	to Water (Feet)		PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEV (REFEREN	O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)	14"	TUBING CAPACITY (gal/ft)	
		bmerged Screen TAL DEPTH - ST			rged Screen (1	EQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	0201112 (10	777.12.2.7 17. 01	1/4 WELL VOLUME	X WELE ON		3 WELL VOLUMES		L	5 WELL VOLUMES	1.44,	
		EQUIPMENT V		I IP VOLUME +	(TUBING CA		L BING LEGNTH	H) + FLOW CEL			
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBII IN WELL				NG LEGNTH _ (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST.	$\times$	$\times$	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM-	X	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (οC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
4:20	0.5				4.65	18.4	390	3.52			
TUBIN		Capacity (gallons/fi A. CAPACITY (Ga	•	0.0006; 3/16"	= 0.0014; 1/	4" = 0.0026;	5/16" = 0.004			5.88 010; 5/8" = (	0.016
				SA	AMPLIN	G DATA	<u> </u>	<u>,                                    </u>			
SAMPLED BY (PRII		Josepha	Hist				LER(S) TURES:	and	J His	<u> </u>	
TUBING MATE (CIRCLE		PP PE NF	TL TT	SAMPLE LEGNTH IN \	TUBING WELL (FEET)	i	į	SAMPLE PU RATE (m	- 1		
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	ΥN	CLEANING STEPS					
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	ΥN	VOC COLL REVERS	ECTED BY E FLOW?	Y N N/A	SEMI-VOLS ( THROUG		Y N N/A
PRESER'		Y N N/A	LIST PRESE ADD								
WEAT											
СОММ	ENTS										

PUMP CODES: PP=Peristaltic Pump, GP= Submersible Grundfos Pump, IBP= In-place Bladder Pump
TUBING MATERIAL CODES: PP= Polypropylene, PE= Polyethylene, NP= Non-inert Plastic, TL= Teflon Lined, TT= Teflon

Date:

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			GF	ROUND	NATER 1	SAMPL!	ING LOC	3			
Client Name:	1	Hazan and Sawye	er .	Location:				Contact: Phone:			
Date Sampled	12/1	lw		SAL Project	1003	007 -	09:63	<del>                                     </del>	GCREC Moi	und Groundwa	ater Analyses
Well Number				Sample ID	DP-D	9-15	09;63	GPS LAT GPS LONG			
				P	URGING			GPS LONG			
WELL		WELL		Screen				Static Depth		PURGE	PP GP
DIAMETER (Inches)		CAPACITY (gal/ft)		Interval (Feet)	UNK	То	UNK	to Water (Feet)		PUMP CODE	IBP GP
TOTAL WELL DEPTH (Feet)	-	REFERENCE ELEVATION (NGVD)		ELEV	D WATER /ATION ICE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		ubmerged Screen ( DTAL DEPTH - ST				IEQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL	JLUME - (10	HAL DEPTH - 31.	1/4 WELL	X WELL CAL	ICIT -	3 WELL			5 WELL		
VOLUME		EQUIPMENT VO	VOLUME	MP VOLUME -	+ (TUBING CA	VOLUMES	BING LEGNTH	H) + FLOW CEL	VOLUMES L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBII IN WELL			1	NG LEGNTH L (FEET)		PURGE TIME START	-	PURGE TIME END		TOTAL PURGED	
INST. ID				$\searrow$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ < 0.2)	SP COND (uS/cm) (∆ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
9:30	1				5.30	19.1	433	3.20			
		Capacity (gallons/f	·							"5.88	
TUBIN	IG INSIDE DI	A. CAPACITY (Ga	al./Ft.): 1/8" =				5/16" = 0.004	4; 3/8" = 0.00	6; 1/2" = 0.0	010; 5/8" = 0	0.016
		<del> </del>		<u>_</u>	AMPLIN			<del></del>			
SAMPLED BY (PRI		105	sefm	Hors +			PLER(S) ATURES:	Jord	low the	~rt	
TUBING MAT		PP PE NF	P TL TT	1	E TUBING WELL (FEET)			SAMPLE PL RATE (n			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	YN	CLEANING STEPS					
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	YN		LECTED BY SE FLOW?	Y N N/A		COLLECTED GH TRAP?	Y N N/A
PRESER CHECKED		Y N N/A		SERVATIVES DED							
WEAT CONDI											
COMM	1ENTS										
	TU	PUMP CO BING MATERIAL						n-place Bladder ic TI = Teflon I		flon	
	oviouad Pv		CODES: PP=	Polypropylene	s, PE- Polyeti	lylene, NF - N	Date:		illed, 11- Te	11011	

Date:

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			GF	<b>LOUNDY</b>	WATER S	SAMPLI	ING LOC	3			
Client Name:	ŀ	Hazan and Sawye	ır	Location:				Contact: Phone:			
Date Sampled	12/0	9/10		SAL Project #	1003	5007-	-17)	Project Name	GCREC Mo	und Groundwa	ater Analyses
Well Number	<del></del>	1110		Sample ID	10-D1	3007- 09-21		GPS LAT			
				P	URGING			GPS LONG			
WELL		WELL		Screen				Static Depth		PURGE	PP GP
DIAMETER (Inches)		CAPACITY (gal/ft)		Interval (Feet)	UNK	То	UNK ·	to Water (Feet)		PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEVA	D WATER 'ATION ICE-STATIC)			TUBING DIAMETER (Inches)	5/14	TUBING CAPACITY (gal/ft)	
		bmerged Screen (				IEQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
	OLUME = (TO	TAL DEPTH - ST	1	x WELL CAPI	iCITY =	2 14/51 1	1		5 14/51 1		
ONE WELL VOLUME	L	EQUIPMENT VO	1/4 WELL VOLUME	MB VOLUME -	- (TURING CA	3 WELL VOLUMES	DINIC I EGNTI	1) + FLOW CEI	5 WELL VOLUMES		
CUMP		EQUIFWENT	1	T VOLUME .	(TODINO OA			1) 11 11011 011			
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		1
INITIAL TUBIN			FINAL TUBIN	NG LEGNTH L (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID					SAL-SAM-63-	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\searrow$	$\geq$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (οC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
q:50	1-5				5.78	21.7	300	1.35			
TURIN	_	Capacity (gallons/f A. CAPACITY (Ga					7, 4"=0.65, 5/16" = 0.004			2"5.88 .010; 5/8" = 6	0.016
l Voin	יים שחופעון קו	A. CAPACITI (GE	il./Ft.): 170 -		AMPLIN			+; 3/0 - 0.0.	0, 1/2	010, 0.0	0.010
SAMPLED BY	// COMPANY	1	11. 1		William		PLER(S)				
(PRI		Josefm	A4.24				ATURES:	your	~ 4	int	
TUBING MATI		PP PE NE	P TL TT		E TUBING WELL (FEET)	,		SAMPLE PU RATE (r	UMP FLOW mL/min)		
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Y N	CLEANING STEPS					
FIELD FILTERED?	YN	FILTER SIZE (μm)		DUPLICATE	E Y N		LECTED BY SE FLOW?	Y N N/A		COLLECTED GH TRAP?	Y N N/A
PRESER	RVATION IN FIELD?	Y N N/A		SERVATIVES DDED							
WEAT CONDI	THER ITIONS										
COMM	MENTS										
								n-place Bladder			
	TUE	BING MATERIAL	CODES: PP=	Polypropylene	e, PE= Polyeth	hylene, NP= N	Non-inert Plasti		_ined, TT= Te	∌flon	

Date:

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

### GROUNDWATER SAMPLING LOG

		GROUNDY	VATER SAIVIPLING LO	G	
Client Name:	Hazan and Sawyer	Location:		Contact:	
Client Name.	nazan anu Sawyei	Location.		Phone:	
Date Sampled	12/1/10	SAL Project #	1003007-11	Project Name	GCREC Mound Groundwater Analyses
Well Number	•	Sample ID	DP-D09-17	GPS LAT	
wen rumber		Sample ID	Dr-Dot 27	GPS LONG	
		D	LIPCING DATA		

				P	URGING	3 DATA					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEV	O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)	5/4	TUBING CAPACITY (gal/ft)	
		bmerged Screen TAL DEPTH - ST				EQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	( )		1/4 WELL VOLUME			3 WELL VOLUMES			5 WELL VOLUMES		
		EQUIPMENT V	DLUME = PUN	1P VOLUME +	(TUBING CA	PACITY X TUE	BING LEGNTH	I) + FLOW CEL	L VOLUME		
PUMP VOLUME	,		TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBI IN WELL				NG LEGNTH _ (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID	$\times$	$\times$	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55- —	SAL-SAM-	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
10:05	2		5		5.97	20.2	270	4:476			
	:								,		
	Well C	Capacity (gallons/f	oot): 0.75"=0.	02, 1.25"=0	).06, 2"=0.1	6, 3"=0.37,	, 4"=0.65,		,	<b>'</b> 5.88	
TUBIN	NG INSIDE DIA	A. CAPACITY (Ga	I./Ft.): 1/8" =	0.0006; 3/16"	= 0.0014; 1.	/4" = 0.0026;	5/16" = 0.004	3/8" = 0.00	6; 1/2" = 0.0	010; 5/8" = 0	0.016

				SA	NIPLII	NG DATA					
SAMPLED BY (PRI		Josefm	Hrm f			SAMPLER(S) SIGNATURES:	Joseph	i Hri	ist		
TUBING MATE (CIRCLE		PP PE NP	TL TT	SAMPLE LEGNTH IN V		-)	SAMPLE PU RATE (m				
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	ΥN	CLEANING STEPS					
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	ΥN	VOC COLLECTED REVERSE FLOW	1 V N N/Δ I		COLLECTED SH TRAP?	Y N	N/A
PRESER' CHECKED		Y N N/A		ERVATIVES DED							
WEAT CONDI											
СОММ	ENTS										
						rsible Grundfos Pump, IE					
		NG MATERIAL C	ODES: PP=	Polypropylene,	PE= Polye	thylene, NP= Non-inert		ned, II=Te	tion		
Re	viewed By:						Date:				

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

### GROUNDWATER SAMPLING LOG

		CITOOIIDI	TATER DAME LING EC	,	
Client Name:	Hazan and Sawyer	Location:		Contact:	
Oliciti (Vallie)	riazan and Sawyer	Location.		Phone:	
Date Sampled	12/1/10	SAL Project #	1003007-12	Project Name	GCREC Mound Groundwater Analyses
Well Number		Sample ID	DP-E12-10	GPS LAT	
Well Mullipel		Sample ID	01/2 10-10	GPS LONG	
		D	LIDGING DATA		

				P	URGING	DATA					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		GROUND ELEVA (REFERENC	ATION CE-STATIC)			TUBING DIAMETER (Inches)	1/4"	TUBING CAPACITY (gal/ft)	
		bmerged Screen (				EQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	OLUME = (TO	TAL DEPTH - ST	ATIC DEPTH) 1/4 WELL VOLUME	x WELL CAPI	CITY =	3 WELL VOLUMES			5 WELL VOLUMES		
		EQUIPMENT VO	DLUME = PUM	1P VOLUME +	(TUBING CA	PACITY X TUE	ING LEGNTH	) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBI IN WELL				NG LEGNTH L (FEET)		PURGE TIME START	-	PURGE TIME END		TOTAL PURGED	
INST.	X	X	X		SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\geq$	$\geq$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
10:45	0.5		3.5		5.48	19.2	491	4.68			
	NA/all	Capacity (gallons	(foot): 0.75"=0	).02. 1.25"=	0.06. 2"=0.	16. 3"=0.37	, 4"=0.65,	5"=1.02,	6"=1.47, 12	2"5.88	
TIIDI	NG INSIDE D	IA. CAPACITY (G	al /Ft.): 1/8" =	= 0.0006; 3/16			5/16" = 0.00	4; 3/8" = 0.00	06; 1/2" = 0	.010; 5/8" =	0.016
1081	NO INSIDE D	IA. OAI AOITT (O				:0 DAT					

				SA	MPLIN	G DATA	<b>\</b>			*	
SAMPLED BY (PRII		Jokan	Hirst	<u>, , , , , , , , , , , , , , , , , , , </u>			LER(S) TURES:	Josep	· H	nc	
TUBING MATE	RIAL CODE	PP PE NF		SAMPLE LEGNTH IN V				SAMPLE PL RATE (r			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Y N	CLEANING STEPS			T	201150750	
FIELD FILTERED?	Y N	FILTER SIZE (μm)		DUPLICATE	ΥN		ECTED BY E FLOW?	Y N N/A		COLLECTED Y	N N/
PRESER' CHECKED		Y N N/A		ERVATIVES DED							
WEAT CONDI											
COMM	ENTS										
		PUMP CO	DES: PP=Pe	ristaltic Pump,	GP= Submers	sible Grundfos	Pump, IBP= I	n-place Bladder	Pump	oflon	
	TUE	BING MATERIAL	CODES: PP=	Polypropylene	, PE= Polyeth	nylene, NP= N	Non-inert Plast	ic, TL= Tetion	Linea, II= I€	SHOLL	
Re	eviewed By						Date	:			

SOUTHERN ANALYTICAL LABORATORIES, INC. 110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

) (P	RINT)	0.70							PUMP FLOW		
SAMPLED E		NY JOY!	in Itins	+			PLER(S) ATURES:	Josef	> the	<i>ii</i> C	
TUB	ING INSIDE	DIA. CAPACITY (	Gal./Ft.); 1/8"	= 0.0006; 3/16	6" = 0.0014; SAMPLIN	1/4" = 0.0026;		0.0			
	We	ell Capacity (gallon	s/foot): 0.75"=	0.02, 1.25"							= 0.016
									01-4 47 4	2"5.88	
							<u> </u>			<del> </del>	-
				ļ				<del> </del>		-	
			<u> </u>		-	<del> </del>		<del> </del>	<del>                                     </del>		-
10250	1		3.5		4.88	22.2	550	2.47			
TIME	VOLUME PURGED (Gallons)	PURGED	PURGE RATE (gpm	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	(VTUS) (VTUS) (<20 NTU)	COLOR (Describe)	ODOR (Describe
INST. ID	$\times$				SAL-SAM-63	65		SAL-SAM-55-	SAL-SAM-		$\times$
INITIAL TUB! IN WELL		1		ING LEGNTH LL (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		1
VOLUME		EQUIPMENT V	OLUME = PU	MP VOLUME +	(TUBING CA	PACITY X TUE	ING LEGNT	H) + FLOW CEL	-		
ONE WELL	OLOINE - (1	OTAL BLY III- 0	1/4 WELL	, x WEEL ON	-	3 WELL VOLUMES			5 WELL VOLUMES		
Purge Tec	hnique: q S	ubmerged Screen OTAL DEPTH - S	(1,1/4,1/4 Wel	l) q Submer	ged Screen (1	EQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
OTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		GROUND ELEVA (REFERENC	ATION CE-STATIC)			TUBING DIAMETER (Inches)	5/164	TUBING CAPACITY (gal/ft)	
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
				Pl	URGING	DATA					
Vell Number		•		Şample ID	DP-E	007-		GPS LAT			
ate Sampled	12/	1 10		SAL Project #	1003	007-	13		GCREC Mou	nd Groundwa	ter Analyses
lient Name:		Hazan and Sawye	r	Location:				Contact: Phone:			
			1	T	<del></del>			Contact			

<del></del>			115			SAMPLE	ER(S)	( mall	this	×	
SAMPLED BY (PRII		Jokhu	(九八十	-	_	SIGNATI	JRES:	100			
TUBING MATE	RIAL CODE	<del></del>	TL TT	SAMPLE LEGNTH IN V				SAMPLE PU RATE (n			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	ΥN	CLEANING STEPS VOC COLLE	CTED BY		SEMI-VOLS	COLLECTED	Y N N/A
FIELD FILTERED?	Y N	FILTER SIZE (μm)		DUPLICATE	ΥN	REVERSE		Y N N/A	THROUG	GH TRAP?	1 14 14/7
PRESER CHECKED		Y N N/A		SERVATIVES DED	L						
WEAT CONDI											
COMMENTS  PUMP CODES: PP=Peristaltic Pump, GP=							Duma IPP- I	n niace Bladder	Pumo		
	PUMP CODES: PP=Peristaltic Pump, GP= TUBING MATERIAL CODES: PP= Polypropylene, PE=						on-inert Plast	ic, TL= Teflon I	ined, TT= To	eflon	
							Date	:			
l R	eviewed By							<u> </u>			-

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### **GROUNDWATER SAMPLING LOG**

			GF	ROUNDV	VATER	SAMPLI	ING LO	<b>3</b>			
Client Name:	I	Hazan and Sawye	r	Location:				Contact: Phone:			
Date Sampled	ાત્રી	9/10		SAL Project	1003	007-	14	Project Name	GCREC Mo	und Groundwa	ater Analyses
Well Number	· · ·	<b>-</b>		Sample ID	DP-EN	007- 2-22		GPS LAT			
				Р	URGINO			0.020.00			
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)	·	Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEV	O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)	5/12"	TUBING CAPACITY (gal/ft)	
		bmerged Screen				EQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	OLUME = (TC	OTAL DEPTH - ST	1/4 WELL VOLUME			3 WELL VOLUMES			5 WELL VOLUMES		
		EQUIPMENT VO	DLUME = PUN	1P VOLUME +	(TUBING CA	PACITY X TUI	BING LEGNTH	I) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBI				NG LEGNTH _ (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID	$\times$	$\times$	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55- —	SAL-SAM- 0	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
11:05	1.5	345	3.5		5.00	20.4	464	3/273 #			
TUDA		Capacity (gallons/f			•					'5.88 010: 5/8" = 0	0.016
TOBIN	NG INSIDE DIA	A. CAPACITY (Ga	i./Ft.): 1/8" =			G DATA	5/16" = 0.004	4; 3/8" = 0.00	6; 1/2" = 0.0	J10; 5/6°=1	0.010
SAMPLED BY		Jorean	Hirst	3/	ZIAII. FIIA	SAMP	LER(S) TURES:	Gor	ywi Ha	ise	
TUBING MAT	ERIAL CODE	PP PE NF		1	TUBING	3.3171		SAMPLE PU	JMP FLOW		

				<u> </u>	///// PP///	O D/ (1//	•					
SAMPLED BY (PRI		Jothn	Hirst			SAMPI SIGNA	LER(S) TURES:	Gor	Gui Ha	ise		
TUBING MAT (CIRCLI		PP PE NP	TL TT	SAMPLE LEGNTH IN V				SAMPLE PU RATE (n				
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Y N	CLEANING STEPS						
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	Y N		ECTED BY E FLOW?	Y N N/A	l	COLLECTED SH TRAP?	Y N	N/A
PRESER CHECKED		Y N N/A		ERVATIVES DED								
WEAT CONDI									-			
COMM	IENTS											
		PUMP COD	ES: PP=Per	istaltic Pump, (	GP= Submers	ible Grundfos I	Pump, IBP= In	-place Bladder	Pump			
	TUB	ING MATERIAL C	ODES: PP=	Polypropylene,	PE= Polyeth	ylene, NP= N	on-inert Plastic	c, TL= Teflon L	ined, TT= Te	flon		
Re	eviewed By:						Date:					

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### **GROUNDWATER SAMPLING LOG**

			CICOUID	ALLICOAMI LING L	<b>3</b> 0	
Client Name:		Hazan and Sawyer	Location:		Contact:	
Client Name.		nazan ano Sawyei	Location.		Phone:	
Date Sampled	12	7/10	SAL Project #	1003007-15	Project Name	GCREC Mound Groundwater Analyses
Well Number			Sample ID	DP-E12-28	GPS LAT	
Well Nulliber			Sample ib	VP-E12-20	GPS LONG	
***			5	LIDCING DATA		

### PURGING DATA

				P	URGING	DATA					
WELL DIAMETER (inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)			O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		bmerged Screen ( TAL DEPTH - ST				EQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	OLUME = (10		1/4 WELL VOLUME			3 WELL VOLUMES			5 WELL VOLUMES		
		EQUIPMENT V	DLUME = PUM	1P VOLUME +	(TUBING CA	PACITY X TUE	BING LEGNTH	l) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBI IN WELL			FINAL TUBII IN WELL	NG LEGNTH _ (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST.	$\times$	$\times$	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55- —	SAL-SAM- 0	$\times$	$\nearrow$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
11:20	2				5.17	21.9	217	1.01			
	:										
		Capacity (gallons/				-,				"5.88	
TUBI	NG INSIDE DI	A. CAPACITY (Ga	al./Ft.): 1/8" =	0.0006; 3/16	' = 0.0014; 1	/4" = 0.0026;	5/16" = 0.00	4; 3/8" = 0.00	6; 1/2" = 0.	010; 5/8" =	0.016

				SA	AMPLIN	GDAIA			_	_		
SAMPLED BY / (PRIN		Josefin	Hirst	-		SAMPL SIGNAT	' '	Jos	afai t	first		
TUBING MATE		PP PE NP	TL TT		TUBING WELL (FEET)			SAMPLE PU RATE (r				
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	ΥN	CLEANING STEPS						
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	ΥN	VOC COLL REVERSE		Y N N/A	1	COLLECTED 3H TRAP?	Y 1	N/A
PRESERV CHECKED I		Y N N/A		ERVATIVES DED								
WEATH CONDIT												
СОММЕ	ENTS											
		PUMP COD	ES: PP=Pe	ristaltic Pump,	GP= Submers	ible Grundfos F	Pump, IBP= In	-place Bladder	Pump			
	TUB	ING MATERIAL C	ODES: PP=	Polypropylene	, PE= Polyeth	ylene, NP= No	on-inert Plastic	c, TL= Teflon L	ined, TT= Te	flon		
Rev	viewed Bv:						Date:					

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		EW BOULE			WATER						
Client Name:		Hazan and Sawye	r	Location:		***		Contact:			
				SAL Project		· · · · · · · · · · · · · · · · · · ·		Phone:			
Date Sampled	12/9	110		#	1003	5007 -		Project Name	GCREC Mo	und Groundwa	ater Analyses
Well Number			_	Sample ID	DP-F	08-14	<u> </u>	GPS LAT GPS LONG			
				P	URGINO	DATA					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEV (REFEREN	O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		bmerged Screen TAL DEPTH - ST			rged Screen (1	EQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	SLOWE - (10	TAL DEF III- 31	1/4 WELL VOLUME	X WLLL CAP	ICH I	3 WELL VOLUMES		<u> </u>	5 WELL VOLUMES		
		EQUIPMENT VO		L MP VOLUME +	- (TUBING CA		I BING LEGNTH	l) + FLOW CEL			
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBIN	The state of the s			NG LEGNTH _ (FEET)		PURGE TIME START		PURGE TIME END	!	TOTAL PURGED	
INST. ID	$\times$	$\geq$	$\geq$	$\geq$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\times$	$\geq$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (οC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
11:45	1				7.04	22.4	1412	6,09			
						, , , , , , , , , , , , , , , , , , , ,					
											is
	Mali	apacity (gallons/f	not): 0.75"-0	02 1 25"-0	).06, 2"=0.1	6, 3"=0.37,	4"=0.65,	5"=1.02, 6	"=1.47, 12"	5.88	
TUBIN		A. CAPACITY (Ga					5/16" = 0.004				).016
			· ·		AMPLIN						
SAMPLED BY (PRII		Josefi	1 15/5			SAMPI	LER(S) TURES:	Jos	bi H	int	
TUBING MATE (CIRCLE		PP PE NF	' TL TT		TUBING WELL (FEET)			SAMPLE PU RATE (n			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	YN	CLEANING STEPS					
FIELD FILTERED?	Y N	FILTER SIZE (μm)	LICT PRES	DUPLICATE	Y N		ECTED BY E FLOW?	Y N N/A	SEMI-VOLS THROUG		Y N N/A
PRESER\ CHECKED I		Y N N/A		ERVATIVES DED					· · · · · · · · · · · · · · · · · · ·		

COMMENTS

WEATHER CONDITIONS

foam in note at beginning of in sample bottle

PUMP CODES: PP=Peristaltic Pump, GP= Submersible Grundfos Pump, IBP= In-place Bladder Pump

TUBING MATERIAL CODES: PP= Polypropylene, PE= Polyethylene, NP= Non-inert Plastic, TL= Teflon Lined, TT= Teflon

Reviewed By:

Date:

		EW BOULE						,	813-855	5-2218	
			GF	ROUNDV	VATER	SAMPLI	NG LO	3	_		
Client Name:		lazan and Sawye	,	Location:				Contact:			
Cilent Name.	<u>'</u>	lazali aliu Sawye		Location.				Phone:			
Date Sampled	12/9	110		SAL Project	1003	007-	-17	Project Name	GCREC Moi	und Groundwa	iter Analyses
Well Number		<b>-</b>		Sample ID	NO- 00	18-20		GPS LAT			
vveii ivairibei							····	GPS LONG			
				P	URGINO	S DATA					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)	AL WELL REFERENCE ELEVATION				WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		bmerged Screen				IEQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
WELL V	OLUME = (TC	TAL DEPTH - ST	ATIC DEPTH)	x WELL CAPI	CITY =			<u> </u>			<u></u>
ONE WELL VOLUME			1/4 WELL VOLUME			3 WELL VOLUMES			5 WELL VOLUMES		
		EQUIPMENT V	DLUME = PUN	MP VOLUME +	(TUBING CA	PACITY X TUE	BING LEGNTH	H) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBII				NG LEGNTH L (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	

TOTAL SP COND TURBIDITY DO Depth to рΗ TEMP **VOLUME** ODOR COLOR VOLUME **PURGE** (oC) (SU) (uS/cm) (mg/L) (NTUs) Water TIME **PURGED** (Describe) (Describe) RATE (gpm) **PURGED** (<20 NTU) (% SAT <20) (Feet)  $(\Delta < 0.2)$  $(\Delta < 0.2)$  $(\Delta < 5\%)$ (Gallons) (Gallons) 1.77 6.34 368 1.5 23.2 12:00

SAL-SAM-63

SAL-SAM -

65-\_

SAL-SAM-63 SAL-SAM-55-

3/8" = 0.006;

5/16" = 0.004;

SAL-SAM-

4"=0.65, 5"=1.02, 12"5.88 3"=0.37, Well Capacity (gallons/foot): 0.75"=0.02, 2"=0.16, 1.25"=0.06, 1/2" = 0.010; 5/8" = 0.016

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; SAMPLING DATA

				J.	VIAIL FIIA	GDAIA	·				
SAMPLED BY (PRII		Joxfin	Hirst			SAMPI SIGNA	LER(S) TURES:	Gor	elgi thi	1	
TUBING MATE (CIRCLE		PP PE NP	TL TT	SAMPLE LEGNTH IN V			_	1 '	PUMP FLOW (mL/min)		
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	ΥN	CLEANING STEPS				OOL FOTED	
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	Y N		ECTED BY E FLOW?	Y N N/		COLLECTED GH TRAP?	Y N N/A
PRESER' CHECKED		Y N N/A		ERVATIVES DED							
WEAT CONDI						·					
COMM	ENTS										
		PUMP COL	ES: PP=Pe	ristaltic Pump,	GP= Submers	sible Grundfos	Pump, IBP= I	n-place Blade	er Pump		
	TUB	ING MATERIAL C	ODES: PP=	Polypropylene	, PE= Polyeti	hylene, NP= N			n Lined, II = I	etion	
Re	eviewed By:						Date	:			

INST. ID

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

		GROUNDY	VAIER	SAMPLI	NG LO	G			
Client Name:	Hazan and Sawyer	Location:				Contact: Phone:			
Date Sampled	12/9/10	SAL Project #	1003	3007	-18	Project Name	GCREC Mou	nd Groundwa	ater Analyses
Well Number		Sample ID	DP-FO	2 . 0 7		GPS LAT			
Well Nullibel		Sample ID	16-60	8-28		GPS LONG			
		Р	URGING	DATA					
WELL	WELL	Screen				Static Depth		PURGE	PP GP
DIAMETER	CAPACITY	Interval	UNK	To	UNK	to Water		PUMP	PP GP IBP
(Inches)	(gal/ft)	(Feet)				(Feet)		CODE	189
	DEFEDENCE	CDOUNG	WATER			TUDING		TUDING	

				P	URGING	DAIA					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		GROUND ELEVA (REFERENC	NOITA			TUBING DIAMETER (Inches)	5/16"	TUBING CAPACITY (gal/ft)	
		bmerged Screen		/	· ·	EQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
	OLUME = (TO	TAL DEPTH - ST	<del></del>	x WELL CAPI	CITY =						
ONE WELL VOLUME			1/4 WELL VOLUME			3 WELL VOLUMES			5 WELL VOLUMES		
		EQUIPMENT V	DLUME = PUM	IP VOLUME +	(TUBING CAI	PACITY X TUI	BING LEGNTH	l) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBII IN WELL			FINAL TUBIN			PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID	$\times$	$\times$	$\times$	$\times$	SAL-SAM-63-	SAL-SAM - 65	SAL-SAM-63-	SAL-SAM-55-	SAL-SAM- 0		
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (οC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
12:10	RI	2	4		5.96	22.2	322	3.90			
12:15	2	2	4		6.11	23,1	332	1.43			
					۲.						
THOU		Dapacity (gallons/f							)"=1.47, 12 16: 1/2" = 0	[ "5.88 010: 5/8" = 1	0.016

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

### CAMPLINIC DATA

				SA	AMPLIN	G DATA	<b>\</b>					
SAMPLED BY / (PRIN		Josefin	Hist				LER(S) TURES:	Joseph	· Hira	(		
TUBING MATE		PP PE NP	TL TT	SAMPLE LEGNTH IN \	TUBING WELL (FEET)			SAMPLE PU RATE (r	JMP FLOW			_
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	ΥN	CLEANING STEPS						
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	ΥN	1	ECTED BY	Y N N/A		COLLECTED H TRAP?	Υ	N N/A
PRESERV CHECKED II		Y N N/A		ERVATIVES DED								
WEATH CONDIT												
СОММЕ	ENTS		_									
								n-place Bladder				
	TUB	ING MATERIAL C	ODES: PP=	Polypropylene	, PE= Polyetl	nylene, NP= N	lon-inert Plasti	c, TL= Teflon L	ined, TT= Te	flon		
Rev	riewed By:						Date:					

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

and the second second		<del></del>				SAMPLI	10 200	Contact:	·····		
Client Name:	Н	azan and Sawyei	·	Location:			ļ	Phone:			
ate Sampled	IN	2/10		SAL Project #	1003	3007	-19	Project Name	GCREC Mou	nd Groundwa	ter Analyse
Well Number				Sample ID	DP-FII			GPS LAT			
				Р	URGING	DATA					
WELL		WELL		Screen				Static Depth		PURGE	55 0
DIAMETER		CAPACITY		Interval	UNK	To	UNK	to Water		PUMP	PP G IBP
(Inches)		(gal/ft)		(Feet)				(Feet)		CODE	
OTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)			O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
Purge Tec	hnique: q Sut	omerged Screen (	1,1/4,1/4 Well	) q Submei	rged Screen (1	EQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	n (1 Well, 3,3	minutes)
WELL V	OT) = AMUJC	TAL DEPTH - ST	ATIC DEPTH)	x WELL CAPI	CITY =						
ONE WELL			1/4 WELL			3 WELL			5 WELL		
VOLUME			VOLUME	D.VOLUME	(TUBING OA)	VOLUMES	DING LEGNET	V. ELOW CEL	VOLUMES		
		EQUIPMENT V	DLUME = PUN	IP VOLUME +	(TUBING CAI		SING LEGNTH	) + FLOW CEL			
PUMP VOLUME			TUBING LEGNTH	l		FLOW CELL VOLUME			EQUIPMEN T VOLUME		r
INITIAL TUBII				NG LEGNTH _ (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST.	$\times$	$\times$	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\geq$	$\geq$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (οC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOF (Describ
12:50	w.5	(Canonic)		5.3	<del>45</del> 7	19.5	366	5.24			
										•	
TUBI	Well (	Capacity (gallons)	foot): 0.75"=0 al./Ft.): 1/8" =	0.0006; 3/16		1/4" = 0.0026;	5/16" = 0.00	4; 3/8" = 0.00	06; 1/2" = 0.		0.016
SAMPLED B	Y / COMPANY	Josefi	n Hos				PLER(S) ATURES:	Done	low Hi	in	
TUBING MA	RINT) TERIAL CODE LE ONE)		IP TL TT	SAMPL	 E TUBING I WELL (FEET		ATORES.	SAMPLE P	UMP FLOW (mL/min)		
SAMPLING		SAMPLING ENDED	T	FIELD CLEANED	T y N	CLEANING STEPS	6		, , , , , , , , , , , , , , , , , , , ,	.1	
		FILTER SIZE		DUPLICATI		VOC COL	LECTED BY SE FLOW?	Y N N/A		COLLECTE GH TRAP?	YN
INITIATED FIELD	YN	(µm)	1 .								
INITIATED FIELD FILTERED? PRESE	Y N RVATION D IN FIELD?	(μm) Υ Ν Ν/Α		SERVATIVES ODED							
INITIATED FIELD FILTERED? PRESE CHECKEI	RVATION										
INITIATED FIELD FILTERED? PRESE CHECKEI  WEA	RVATION D IN FIELD?	Y N N/A	Al	ODED							
INITIATED FIELD FILTERED? PRESE CHECKEI  WEA	RVATION D IN FIELD? ATHER DITIONS MENTS	Y N N/A	Al	ODED	o GP= Subme	rsible Grundfo	s Pump, IBP=	In-place Bladde	er Pump	eflon	

# **SOUTHERN ANALYTICAL LABORATORIES, INC.** 110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

### **GROUNDWATER SAMPLING LOG**

		0.100.101	·/ · · · · · · · · · · · · · · · · · ·		
Client Name:	Hazan and Sawyer	Location:		Contact:	
Client Ivalile.	i lazari and Gawyer	Location.		Phone:	
Date Sampled	149/10	SAL Project #	1003007-20	Project Name	GCREC Mound Groundwater Analyses
Well Number		Sample ID	10 CU 10	GPS LAT	
Well Number		Sample ID	DP-F11-15	GPS LONG	
		D	LIDCING DATA		

I FLEVATION I FLEVATION I DIAMETER I TITE I CAPACITY I					P	URGINO	<b>DATA</b>					
TOTAL   TOTA	DIAMETER		CAPACITY		Interval	UNK	То	UNK	to Water		PUMP	
WELL VOLUME	TOTAL WELL DEPTH (Feet)	1	ELEVATION		ELEV	ATION			DIAMETER	5/164	CAPACITY	
Note							EQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
PUMP   VOLUME   TUBING   LEGNTH   TUBING   LEGNTH   VOLUME   FLOW CELL   VOLUME   VOLUME   VOLUME   PURGED   CGallons)   VOLUME   PURGED   CGallons)   FLOW CELL   VOLUME   VOLUME   VOLUME   VOLUME   VOLUME   PURGED   CGAllons)   FLOW CELL   VOLUME   VOLUME   VOLUME   VOLUME   FLOW CELL   VOLUME   VO	ONE WELL			1/4 WELL VOLUME		·	VOLUMES			VOLUMES		
VOLUME			EQUIPMENT VO	DLUME = PUN	IP VOLUME +	(TUBING CA	PACITY X TUE	BING LEGNTH	I) + FLOW CEL	L VOLUME		
INST. ID							1	,				
TOTAL VOLUME PURGED (Gallons)  12:												
TIME PURGED (Gallons)		$\times$	$\times$	$\times$		SAL-SAM-63		SAL-SAM-63	SAL-SAM-55-		$\times$	$\times$
Well Capacity (gallons/foot): 0.75"=0.02, 1.25"=0.06, 2"=0.16, 3"=0.37, 4"=0.65, 5"=1.02, 6"=1.47, 12"5.88	TIME	PURGED	VOLUME PURGED	l	Water	(SU)	(oC)	(uS/cm)	(mg/L)	(NTUs)		
Well dapacity (gallorishood). 0.10 =0.02, 1.20 0.00, 2 0.10, 0 0.01, 1 0.00, 1 0.00, 1	12:57	1		Ч		5.00	22.8	547	3.64			
Well dapacity (gallorishood). 0.10 =0.02, 1.20 0.00, 2 0.10, 0 0.01, 1 0.00, 1 0.00, 1												
Well dapacity (gallorishood). 0.10 =0.02, 1.20 0.00, 2 0.10, 0 0.01, 1 0.00, 1 0.00, 1												
Well dapacity (gallorishood). 0.10 =0.02, 1.20 0.00, 2 0.10, 0 0.01, 1 0.00, 1 0.00, 1												
Well dapacity (gallorishood). 0.10 =0.02, 1.20 0.00, 2 0.10, 0 0.01, 1 0.00, 1 0.00, 1												
		Well (	Capacity (gallons/	foot): 0.75"=0.	.02, 1.25"=	0.06, 2"=0.	16, 3"=0.37	, 4"=0.65,	5"=1.02, 6	5"=1.47, 12	"5.88	
	TUBI					' = 0.0014; 1	/4" = 0.0026;	5/16" = 0.00	4; 3/8" = 0.00	06; 1/2" = 0.	010; 5/8" =	0.016

				3 <i>F</i>	AIVIPL	·HI	G DATA					
SAMPLED BY (PRI		Jox 6:1	Hirst				SAMPLER(S) SIGNATURES:	Joseph	this			
TUBING MATE (CIRCLE		PP PE NP	TL TT	SAMPLE LEGNTH IN V				SAMPLE PU RATE (r		,		
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Υ ١	7	CLEANING STEPS					
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	Y	۷	VOC COLLECTED BY REVERSE FLOW?	Y N N/A		COLLECTED SH TRAP?	1 Y	N N/A
PRESER' CHECKED		Y N N/A		ERVATIVES DED								
WEAT CONDI												
COMM	ENTS											
		PUMP COI	DES: PP=Pe	ristaltic Pump,	GP≕ Sub	mers	ible Grundfos Pump, IBP= I	n-place Bladder	Pump	flon		
			ODES: PP=	Polypropylene	, PE= Po	olyeth	ylene, NP= Non-inert Plast		inea, 11=1e	mon		
Re	viewed By:						Date	):		_		

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

### GROUNDWATER SAMPLING LOG

		GROUNDY	VATER SAMPLING LO	G	
Client Name:	Hazan and Sawyer	Location:		Contact:	
Olich Hame.	Tidzari arid Sawyer	Location.		Phone:	
Date Sampled	calalio	SAL Project #	1003007-21	Project Name	GCREC Mound Groundwater Analyses
Well Number		Sample ID	DP-F11-18	GPS LAT	
vveii ivuilibei		Sample ID	pr-411-18	GPS LONG	
		P	URGING DATA		
WELL	WELL	Screen		Static Depth	PURGE PP GP

				Pi	JRGING	DATA					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		GROUND ELEVA (REFERENC	ATION			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
Purge Tec	hnique: q Sul	bmerged Screen	(1,1/4,1/4 Well			EQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
WELL V	OLUME = (TO	TAL DEPTH - ST		x WELL CAPI	CITY =				5 WELL		
ONE WELL			1/4 WELL VOLUME			3 WELL VOLUMES			VOLUMES		
	<u> </u>	EQUIPMENT VO	DLUME = PUN	IP VOLUME +	(TUBING CA	PACITY X TUE	SING LEGNTH	l) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBI	NG LEGNTH (FEET)			NG LEGNTH _ (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST.	X	$\times$	X	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\geq$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
1:05	1.25				5.02	23.1	497	2.48			
				· · ·							
				<del>                                     </del>	<del>                                     </del>						
	Mall	Capacity (gallons	/foot): 0.75"=0	.02. 1,25"=	0.06, 2"=0	.16, 3"=0.3	7, 4"=0.65,	5"=1.02,	6"=1.47, 1	2"5.88	
TUD	INC INSIDE D	IA. CAPACITY (G	Sal /Ft.): 1/8" =	= 0.0006; 3/16	,		5/16" = 0.00	04; 3/8" = 0.0	06; 1/2" = 0	0.010; 5/8" =	0.016
108	שטוכאוו טאווי	IA. OALAOITI (C	20 0.7. 0.70			IC DAT					

			Ş <i>F</i>	/IAIL	PIIA.	GDAIA						
SAMPLED BY / COMPANY (PRINT)	Josefu	Hirst				SAMPL SIGNAT		Josep	bu sur	<del>ا</del>		
TUBING MATERIAL CODE (CIRCLE ONE)	PP PE NP		SAMPLE LEGNTH IN V						PUMP FLOW (mL/min)			
SAMPLING INITIATED	SAMPLING ENDED		FIELD CLEANED	Y	N	CLEANING STEPS			Torsu VOLS	COLLECTED	Γ	
FIELD Y N	FILTER SIZE (μm)		DUPLICATE	Y	N	VOC COLL REVERS	ECTED BY E FLOW?	Y N N/		COLLECTED GH TRAP?	ΥN	N/A
PRESERVATION CHECKED IN FIELD?	Y N N/A		ERVATIVES DED									
WEATHER CONDITIONS												
COMMENTS											·	
	PUMP COL	DES: PP=Pe	ristaltic Pump,	GP= S	Submers	sible Grundfos	Pump, IBP= I	n-place Blade	der Pump	eflon		
TUE	BING MATERIAL C	ODES: PP=	Polypropylene	, PE=	Polyet	hylene, NP= N	Ion-inert Plast	ic, it= rend	in Linea, 11-1	GIIOII		
Reviewed By	Reviewed By:						Date	<u>:                                    </u>				

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

### GROUNDWATER SAMPLING LOG

		CITOCIADA	AILK SAMI LING L	.00	
Client Name:	Hazan and Sawyer	Location:	1417 007	Contact:	
Chefft (Vairie.		Location,	1003007	Phone:	
Date Sampled	12/9/10	SAL Project #	22	Project Name	GCREC Mound Groundwater Analyses
Well Number		Sample ID	NO 511-21	GPS LAT	
Well Indiliber		Sample ID	DP-F11-2)	GPS LONG	
		Pl	JRGING DATA		

				P	URGING	<b>DATA</b>					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEV	O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		bmerged Screen				EQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	OLUME = (10	TAL DEPTH - ST	1/4 WELL VOLUME	X WELL CAP	ICITY =	3 WELL VOLUMES		<u> </u>	5 WELL VOLUMES		
	l	EQUIPMENT VO	DLUME = PUN	IP VOLUME +	· (TUBING CA	PACITY X TUI	BING LEGNTH	l) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBI IN WELL				NG LEGNTH L (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST.		> <		$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\geq$	$\geq$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
1:21	1				4.98	21.7	465	7.59			
1:25	0.5				5.02	12.7	458	8.10			
						1					<u></u>
		Capacity (gallons/							, , , , , , , , , , , , , , , , , , , ,	"5.88	0.040
TUBII	NG INSIDE DI	A. CAPACITY (Ga	al./Ft.): 1/8" =	0.0006; 3/16	" = 0.0014; 1	/4" = 0.0026;	5/16" = 0.00	4; 3/8" = 0.00	1/2" = 0.	010; 5/8" =	0.016

				SA	AMPLIN	IG DATA	<u> </u>					
SAMPLED BY (PRI	1	Josefm	Hirst			1	LER(S) TURES:	Joseb	: Hit	x		
TUBING MATE (CIRCLE		PP PE NP	TL TT	SAMPLE LEGNTH IN V		)		SAMPLE PU RATE (r				
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Y N	CLEANING STEPS						
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	ΥN		ECTED BY E FLOW?	Y N N/A		COLLECTED Y	/ N	N/A
PRESER CHECKED		Y N N/A		ERVATIVES DED								
WEAT CONDI	—											
СОММ	ENTS											
		PUMP COL	DES: PP=Pe	ristaltic Pump,	GP= Submer	sible Grundfos	Pump, IBP= Ir	-place Bladder	Pump			
		ING MATERIAL C	ODES: PP=	Polypropylene	, PE= Polyet	hylene, NP= N			ined, II= le	etion		·
Re	viewed By:						Date	<u> </u>				

# SOUTHERN ANALYTICAL LABORATORIES, INC. 110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

### **GROUNDWATER SAMPLING LOG**

		0.1001101	TATILITY OF THE PROPERTY OF TH		
Client Name:	Hazan and Sawyer	Location:	1003007	Contact:	
Oliche Ttallie.		Location.	_ 100 500 7	Phone:	
Date Sampled	12/9/10	SAL Project #	23	Project Name	GCREC Mound Groundwater Analyses
Well Number		Sample ID	DP-F11-24	GPS LAT	
Well Hamber		Odnipie ID	D(=111 21	GPS LONG	
		D	LIDCING DATA		

				P	URGING	G DATA		-			
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEV	O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		bmerged Screen TAL DEPTH - ST	· · · · · · · · · · · · · · · · · · ·	<del>/                                    </del>	rged Screen (1	IEQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scre	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	OLOWE - (10	TAE DET TIT- ST	1/4 WELL VOLUME	X WELL CAP	0111 -	3 WELL VOLUMES			5 WELL VOLUMES		
		EQUIPMENT V	OLUME = PUM	1P VOLUME +	(TUBING CA	PACITY X TUI	BING LEGNTH	l) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBI				NG LEGNTH (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID	$\times$	>	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63-	SAL-SAM-55-	SAL-SAM- 0	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
1:40	1	1.5			5.08	21.9	484	3.28			
1:45	0.5	1.5			5.00	22.9	475	1.15			
TUBIN		capacity (gallons/fo					4"=0.65, 5/16" = 0.004			5.88 010; 5/8" = 0	0.016

				37	ZIAIL FIIA	GDAIA	<b>L</b>				
SAMPLED BY / CO (PRINT)	OMPANY	Jo sch	· His	t			LER(S) TURES:	galo	ni Ha	منع	
TUBING MATERIA (CIRCLE ON		PP PE NP	TL TT	SAMPLE LEGNTH IN V				SAMPLE PL RATE (r			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Y N	CLEANING STEPS					
FIELD , FILTERED?	Y N	FILTER SIZE (μm)		DUPLICATE	ΥN	i e	ECTED BY E FLOW?	Y N N/A	1	COLLECTED SH TRAP?	Y N N/A
PRESERVATI CHECKED IN FI		Y N N/A		ERVATIVES DED							
WEATHEI CONDITIOI											
COMMENT	тѕ					-					
		PUMP COL	ES: PP=Per	istaltic Pump, 0	GP= Submers	ible Grundfos I	Pump, IBP= Ir	n-place Bladder	Pump		
	TUBI	NG MATERIAL C	ODES: PP=	Polypropylene,	PE= Polyeth	ylene, NP= No	on-inert Plasti	c, TL= Teflon L	ined, TT= Te	flon	
Reviev	wed By:						Date:				

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### **GROUNDWATER SAMPLING LOG**

GROUNDWATER SAMPLING LOG										
Client Name:	Hazan and Sawyer	Location:	100	Contact:						
Client Ivallie.	riazan anu Sawyer	Location.	160	Phone:						
Date Sampled	12/9/10	SAL Project #	1003007.24	Project Name	GCREC Mound Groundwater Analyses					
Well Number		Sample ID	DP-F11-27	GPS LAT						
well number		Sample ID	DF -1 II 2T	GPS LONG						
DUDCING DATA										

				Pl	URGING	DATA					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		GROUND ELEVA (REFERENC	ATION CE-STATIC)		ï	TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
Purge Tech	nnique: q Sul	omerged Screen (	1,1/4,1/4 Well	) q Submer	ged Screen (1	EQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
WELL VO	OLUME = (TO	TAL DEPTH - ST.		x WELL CAPI	CITY =				5 WELL		
ONE WELL VOLUME			1/4 WELL VOLUME			3 WELL VOLUMES			VOLUMES		
		EQUIPMENT V	DLUME = PUM	IP VOLUME +	(TUBING CA	PACITY X TUE	BING LEGNTH	i) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBII IN WELL				NG LEGNTH L (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST.	X	X	X	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\geq$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
1:55	.1	2	4		5.24	. 23.1	301	1.79			
2:00	a	2	4		5.19	23.3	297	0.82			
			-								
	Well	L Capacity (gallons	/foot): 0.75"=0	0.02, 1.25"=						2"5.88	0.010
TUBI	ING INSIDE D	IA. CAPACITY (G	al./Ft.): 1/8":	= 0.0006; 3/16	5" = 0.0014;	1/4" = 0.0026;	5/16" = 0.00	04; 3/8" = 0.0	06; 1/2" = 0	).010; 5/8" =	0.016

				3 <i>P</i>	MAIL	PIIA.	G DATA					
SAMPLED BY /		Joxfin	His t				SAMPLER(S) SIGNATURES:		Gorelo	i Ha	rist	
TUBING MATE (CIRCLE		PP PE NP		SAMPLE LEGNTH IN V					SAMPLE PU RATE (n			***************************************
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Υ	N	CLEANING STEPS	51/		TSEMI VOLS	COLLECTED	T .
FIELD FILTERED?	ΥN	FILTER SIZE (µm)		DUPLICATE	Υ	N	VOC COLLECTED REVERSE FLOW		Y N N/A		GH TRAP?	Y N N/A
PRESER\ CHECKED I		Y N N/A		ERVATIVES DED								
WEAT CONDIT												
COMM	ENTS											
<u> </u>		PUMP COL	DES: PP=Pe	ristaltic Pump,	GP= S	Submer	sible Grundfos Pump, II	BP= I	n-place Bladder	Pump	oflon	
	TUE	BING MATERIAL C	ODES: PP=	Polypropylene	, PE=	Polyet	hylene, NP= Non-inert	Plast	ic, it= renoil	_meu, 11-1	EHOIT	
Re	viewed By							<u>Date</u>				

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

					WATER						
Client Name:	ı	Hazan and Sawye	er	Location:				Contact: Phone:			
Date Sampled	12/11	0/10		SAL Project #	100	300	<del></del>	Project Name	GCREC Mo	und Groundwa	ater Analyses
Well Number		F15-14	<u> </u>	Sample ID	100	)3007 25	,	GPS LONG			
	<i>"</i> ~ <i>i</i>	, , ,	1	P	URGINO			GPS LONG			
WELL		WELL		Screen	T			Static Depth		PURGE	
DIAMETER (Inches)		CAPACITY (gal/ft)	-	Interval (Feet)	UNK	То	UNK	to Water (Feet)		PUMP CODE	PP GP IBP
TOTAL WELL		REFERENCE		GROUNE	D WATER			TUBING		TUBING	
DEPTH (Feet)		ELEVATION (NGVD)		1	ATION CE-STATIC)			DIAMETER (Inches)		CAPACITY (gal/ft)	
		bmerged Screen TAL DEPTH - ST			rged Screen (1	IEQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL	0201112 (	TAL DEI II. C.	1/4 WELL	A WELL ON	10111	3 WELL	<u> </u>	L	5 WELL		
VOLUME		FOURMENT W	VOLUME - DUM	15 VOLUME 1	TUDING CAL	VOLUMES	CINC LECNIII	" - ELOW CEL	VOLUMES		
		EQUIPMENT VO		IP VOLUME +	- (TUBING CA		BING LEGNTE T	l) + FLOW CEL			
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBI IN WELL			FINAL TUBII IN WELL	NG LEGNTH _ (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID	$\times$	$\overline{}$	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\times$	$\overline{}$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (οC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
0652		1.0			571	21.5	408,4	1,11			
	Well C	Capacity (gallons/fo	oot): 0.75"=0.(	02, 1.25"=0	0.06, 2"=0.1	6, 3"=0.37,	4"=0.65,	5"=1.02, 6	"=1.47, 12"	5.88	
TUBIN		A. CAPACITY (Ga	,				5/16" = 0.004	-	•		0.016
			<u> </u>		AMPLIN					·	
SAMPLED BY (PRI							LER(S) TURES:	Zen	Way	/	
TUBING MAT (CIRCLI		PP PE NF	° (Д. П		TUBING WELL (FEET)			SAMPLE PU RATE (n			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Y N	CLEANING STEPS		· ·			
FIELD FILTERED?	Y (S)	FILTER SIZE (μm)		DUPLICATE	Y N		ECTED BY E FLOW?	Y N MA	SEMI-VOLS THROUG	COLLECTED H TRAP?	Λ Ν Ν/ <b>(</b> 2)
PRESER CHECKED		ON N/A	LIST PRESE ADD								
WEAT CONDI		CKM									·
COMM	ENTS									,	
		PUMP CO	DES: PP=Peri	staltic Pump,	GP= Submersi	ible Grundfos	Pump, IBP= In	-place Bladder	Pump		
	TUB	ING MATERIAL C								lon	

Date:

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			GF	ROUNDV	VATER	SAMPLI	ING LOC	<b>3</b>			
Client Name:	ŀ	Hazan and Sawye	r	Location:				Contact:			
Date Sampled	1	1		SAL Project	1003	3007		Phone: Project Name	GCREC Mo	und Groundwa	ater Analyses
Well Number	13/10	110	~ ^ ^	# Sample ID	2/	3007		GPS LAT			
Well Hambel	1) H- F	15-20	90		26		<u>طی</u>	GPS LONG			
				Р	URGING	DAIA					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEV. (REFEREN	O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		bmerged Screen TAL DEPTH - ST			rged Screen (1 ICITY =	IEQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3 I	minutes)
ONE WELL VOLUME	OLOWIZ (10	TAL DEL TIT OF	1/4 WELL VOLUME	A WEEE ON	10111	3 WELL VOLUMES		<u> </u>	5 WELL VOLUMES		
		EQUIPMENT V	DLUME = PUN	IP VOLUME +	(TUBING CA	PACITY X TUI	BING LEGNTH	l) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBII IN WELL				NG LEGNTH L (FEET)	•	PURGE TIME START	-	PURGE TIME END	·	TOTAL PURGED	
INST. ID	$\times$	><	$\times$	><	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55- —	SAL-SAM-	$\times$	$\times$
TłME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
0715	,	20			4.9	22,1	649	0.42			
	!				•						
		Capacity (gallons/f				· · · · · · · · · · · · · · · · · · ·	,	· · · · · · · · · · · · · · · · · · ·	,	"5.88	
TUBIN	IG INSIDE DIA	A. CAPACITY (Ga	il./Ft.): 1/8" =					4; 3/8" = 0.00	6; 1/2" = 0.0	010; 5/8" = 0	0.016
				Si	<u>AMPLIN</u>	GDAIA	1				
SAMPLED BY (PRI				T			LER(S) TURES:	Jan le	Vil		
TUBING MATI (CIRCLE		PP PE N	» <b>(</b> 1) т		TUBING WELL (FEET)			SAMPLE PL RATE (r			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	(V) N	CLEANING STEPS	UZ X	ι	Toran voi o	COLLECTED	r
FIELD FILTERED?	Y	FILTER SIZE (μm)	LICT DDEC	DUPLICATE	OR		LECTED BY SE FLOW?	Y N MA		COLLECTED SH TRAP?	Y N N/A
PRESER CHECKED		(Y) N N/A		ERVATIVES DED							
WEAT CONDI		CRIM									
СОММ	IENTS									·	
								-place Bladder		FI	
De		ING MATERIAL (	CODES: PP=	Polypropylene	, PE= Polyeth	iyiene, NP= N	.,		inea, 11=1e	ΙΙΟΠ	
ı Ke	eviewed By:	I					Date:	1			

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			GR	COMPA	VAIERS	SAMPLII	NG LOG	i			
lient Name:	н	azan and Sawye	r	Location:				Contact: Phone:			
ate Sampled	DP F	75 121	1,0/12	SAL Project	1003	007		Project Name	GCREC Mou	nd Groundwat	er Analyses
/ell Number	DPI		·	Sample ID	27			GPS LAT			
	<del></del>	- 0-0		P	URGING			GF3 LONG	<del>,</del>		-
WELL		WELL		Screen				Static Depth		PURGE	PP GP
DIAMETER (Inches)		CAPACITY (gal/ft)		Interval (Feet)	UNK	То	UNK	to Water (Feet)		PUMP CODE	IBP
OTAL WELL EPTH (Feet)		REFERENCE ELEVATION (NGVD)		(REFEREN	ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
Purge Tec	hnique: q Sul	omerged Screen TAL DEPTH - S	(1,1/4,1/4 Wel		rged Screen (1	EQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL	OLOME - (10	TAL DEFITT-5	1/4 WELL	A WELL ON	10111	3 WELL			5 WELL		
VOLUME			VOLUME	<u> </u>		VOLUMES	WO LEONE	) - FLOW OF	VOLUMES		
	r	EQUIPMENT V	OLUME = PUN	MP VOLUME +	· (TUBING CAF		SING LEGNIF	I) + FLOW CEL			
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBI IN WELL	NG LEGNTH (FEET)			ING LEGNTH L (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST.					SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM-		>
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe
1741		2.0			4.9	218	290.8	6.52			
							<u> </u>	· _			
			_								
						37 20	7 411-0.65	5"=1.02,	6"=1.47, 1	2"5.88	
TUB	Well	Capacity (gallor IA. CAPACITY (	s/foot): 0.75"= Gal./Ft.): 1/8"	0.02, 1.25" = 0.0006; 3/1							0.016
				S	AMPLIN	IG DAT	<u> </u>	· .			
	BY / COMPAN' RINT)					1	PLER(S) ATURES:	2-	, W-	4	
	ATERIAL COD	E PP PE	NP TL TT	SAMP LEGNTH II	LE TUBING N WELL (FEET			RATE	PUMP FLOW (mL/min)		
SAMPLING INITIATED		SAMPLING ENDED	S	FIELD CLEANEI	Y N	CLEANING STEPS	DIX	<del>-</del>	SEMI-VOI	S COLLECTE	DĪ.
FIELD FILTERED	Y N	FILTER SIZ (µm)		DUPLICAT			LLECTED BY RSE FLOW?	Y N N/A		JGH TRAP?	YNI
	ERVATION ED IN FIELD?	( N N/		ESERVATIVES ADDED	S   						
I.	ATHER DITIONS	Clen	N						<u> </u>		
CON	MENTS	+									
		1	CODES: PP=								

Date:

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### **GROUNDWATER SAMPLING LOG**

			<u> </u>	CONDI	·//	OAIIII L	NO LOC				
Client Name:	ŀ	Hazan and Sawye	r	Location:				Contact: Phone:			
Date Sampled	12/10	10		SAL Project #	1003	3007	- 29	Project Name	GCREC Mo	und Groundwa	ater Analyses
Well Number		<u>·</u>		Sample ID	10-1	307-1		GPS LAT			
				·	•	•		GPS LONG			
				P	URGINO	DAIA					
WELL DIAMETER		WELL CAPACITY		Screen Interval	UNK	То	UNK	Static Depth to Water		PURGE PUMP	PP GP
(Inches)		(gal/ft)		(Feet)				(Feet)		CODE	IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEV	O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
Purge Tec	hnique: q Su	bmerged Screen	l (1,1/4,1/4 Well	,	· · · · · · · · · · · · · · · · · · ·	L EQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scre		minutes)
WELL V	OLUME = (TO	TAL DEPTH - ST	ATIC DEPTH)	x WELL CAP	ICITY =						
ONE WELL			1/4 WELL			3 WELL			5 WELL		
VOLUME		EQUIPMENT V	VOLUME	10.10.11.15	(TUDA 10 01	VOLUMES	DINIOLEGALE	N. ELOW OF	VOLUMES		
		EQUIPMENT V	JLUME = PUN	IP VOLUME +	(TUBING CA	PACITY X TUI	BING LEGNIF	) + FLOW CEL	L VOLUME	T	
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBI IN WELL				NG LEGNTH L (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID	$\times$		$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55- —	SAL-SAM- 0	$\geq$	
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
8:25	1	-			5.53	21.4	271	3.33 3.629H			
-	Well C	L Capacity (gallons/f	oot): 0.75"=0.	02, 1.25"=0	).06, 2"=0.1	6, 3"=0.37	, 4"=0.65,	5"=1.02, 6	"=1.47, 12	"5.88	J
TUBIN		A. CAPACITY (Ga			<del></del>			1; 3/8" = 0.00	6; 1/2" = 0.	010; 5/8" =	0.016
				S	AMPLIN	G DATA	\				
SAMPLED BY		JOKEN	Hint			SAMP	LER(S) TURES:	Jorbi	Him	1	
TUBING MAT (CIRCL	ERIAL CODE E ONE)	PP PE NI	P TL TT		TUBING WELL (FEET)			SAMPLE PL RATE (r			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	ΥN	CLEANING STEPS					
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	ΥN		LECTED BY SE FLOW?	Y N N/A		COLLECTED 3H TRAP?	Y N N/A
PRESER	RVATION IN FIELD?	Y N N/A		ERVATIVES DED							
	THER TIONS										
СОММ	IENTS										
								-place Bladder			
		ING MATERIAL	CODES: PP=	Polypropylene	e, PE= Polyeth	ıylene, NP= N			ined, TT=Te	flon	
Re	eviewed By:						Date:				

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

### **GROUNDWATER SAMPLING LOG**

OKOONDWATEK SAMI EING EGG										
Client Name:	Hazan and Sawyer	Location:		Contact:						
Cilent Name.	Hazan and Sawyer	Location.		Phone:						
Date Sampled	12/10/10	SAL Project #	1003007-30	Project Name	GCREC Mound Groundwater Analyses					
Well Number		Sample ID	DP-607-17	GPS LAT						
Wen Indiniber		Sample ID	UP-607-17	GPS LONG						
DUDOING DATA										

### PURGING DATA

				Р	URGING	<b>3 DATA</b>					
WELL DIAMETER (Inches)	:	WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEV	WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)	5/14	TUBING CAPACITY (gal/ft)	
		bmerged Screen		, ,	<u> </u>	IEQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
	OLUME = (TO	TAL DEPTH - ST		x WELL CAPI	CITY =		1				
ONE WELL VOLUME			1/4 WELL VOLUME			3 WELL VOLUMES			5 WELL VOLUMES		
ļ		EQUIPMENT VO	DLUME = PUN	1P VOLUME +	(TUBING CA	PACITY X TUI	BING LEGNTH	I) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBII IN WELL			FINAL TUBII IN WELL			PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID	$\times$	$\times$	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
8:35	1-25				5.34	21.9	3/2	2.19			
						,					
	Well C	Capacity (gallons/f	oot): 0.75"=0	02, 1.25"=0	.06, 2"=0.1	6, 3"=0.37,	4"=0.65,	5"=1.02, 6	"=1.47. 12'	<b>'</b> 5.88	
TUBIN		A. CAPACITY (Ga	,				5/16" = 0.004		,	<del> </del>	0.016

				SA	AMPLIN	GDAIA	<b>\</b>				
SAMPLED BY (PRI		Joseph	Hirst				LER(S) TURES:	grebe	> Ha	r <del>à</del> r	
TUBING MATE (CIRCLE		PP PE NP	TL TT		TUBING WELL (FEET)		·	SAMPLE PU RATE (m			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	YN	CLEANING STEPS					
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	ΥN		ECTED BY E FLOW?	Y N N/A		COLLECTED 3H TRAP?	Y N N/A
PRESER' CHECKED		Y N N/A		ERVATIVES DED			1 11 15			· ·	
WEAT CONDI	—										
СОММ	ENTS										
								ı-place Bladder I			
		ING MATERIAL C	ODES: PP=	Polypropylene,	, PE= Polyeth	ylene, NP= N	on-inert Plasti	c, TL= Teflon Li	ned, TT= Te	flon	
Re	viewed By:						Date:	:			

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

### **GROUNDWATER SAMPLING LOG**

GROONDWATER GAMILEMO EGG										
Client Name:	Hazan and Sawyer	Location:		Contact:						
Olicht (Vallie)		Location.		Phone:						
Date Sampled	12/10/10	SAL Project #	1003007-31	Project Name	GCREC Mound Groundwater Analyses					
Well Number		Sample ID	DP-607-21	GPS LAT						
Well Halliber		Sample ID	DF 807 - 21	GPS LONG						
			LIDOULO DATA							

### **PURGING DATA**

				P	URGIN	G DATA					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval UNK (Feet)		То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		GROUND WATER ELEVATION (REFERENCE-STATIC)				TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
Purge Tec	chnique: q Su	bmerged Screen TAL DEPTH - ST	(1,1/4,1/4 Well	) q Subme	rged Screen (*	IEQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	OLOME - (TO		1/4 WELL VOLUME			3 WELL VOLUMES			5 WELL VOLUMES		L
	T	EQUIPMENT V	DLUME = PUN	1P VOLUME +	(TUBING CA	PACITY X TUI	BING LEGNTH	l) + FLOW CEL	L VOLUME		
PUMP VOLUME		TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME			
	UBING LEGNTH FINAL TUBING LEC ELL (FEET) IN WELL (FEET				PURGE TIME START	-	PURGE TIME END		TOTAL PURGED		
INST. ID	$\times$	> <	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
8;45	1.90	1.5			5.38	22.1	341	3.48			
8:50	0.5	1.5			5.37	<i>2</i> 2.9	343	1.66			
<u></u>											
		apacity (gallons/fo	<u>'</u>	•					· · · · · · · · · · · · · · · · · · ·	5.88	
TUBIN	NG INSIDE DIA	CAPACITY (Ga	I./Ht.): 1/8" = (	0.0006; 3/16"	= 0.0014; 1/	4" = 0.0026;	5/16" = 0.004	3/8" = 0.000	6; 1/2" = 0.0	5/8" = 0	0.016

			3 <i>F</i>	4 IVIF	LIN	GDAIA	1								
SAMPLED BY / COMPANY (PRINT)	Josedin	Hr.	nt				LER(S) TURES:	5	) 0 :	نهجام	1tan	100			
TUBING MATERIAL CODE (CIRCLE ONE)	PP PE NP T	L TT	SAMPLE LEGNTH IN V					s			JMP FLOW nL/min)				
SAMPLING INITIATED	SAMPLING ENDED		FIELD CLEANED	Υ	N	CLEANING STEPS						J			
FIELD Y N	FILTER SIZE (μm)		DUPLICATE	Y	N	ł	ECTED BY E FLOW?	Υ	N	N/A		COLLECTED GH TRAP?	Υ	N	N/A
PRESERVATION CHECKED IN FIELD?	Y N N/A		ERVATIVES DED												
WEATHER CONDITIONS															
COMMENTS		•													
	PUMP CODES							•	_						
	ING MATERIAL CODE	ES: PP= I	Polypropylene,	PE=	Polyeth	ylene, NP= N	on-inert Plastic	c, TL	.= Te	eflon L	ined, TT=Te	flon			
Reviewed By:						·	Date:								

# SOUTHERN ANALYTICAL LABORATORIES, INC. 110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

### **GROUNDWATER SAMPLING LOG**

Client Name:	Hazan and Sawyer			Location:				Contact: Phone:						
Date Sampled	12/10/	10		SAL Project #	100	3007	·-32	Project Name	GCREC Mo	und Groundwa	ater Analyses			
Well Number				Sample ID	PP- 60	3007 17-24		GPS LAT	<b></b>					
				P	URGINO			GPS LONG	<u> </u>		· · · · · · · · · · · · · · · · · · ·			
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)	PURGE PUMP CODE		PP GP IBP			
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEV (REFEREN	ELEVATION DIAMETER CAPAC FERENCE-STATIC) (Inches) (gal/f					TUBING CAPACITY (gal/ft)				
		omerged Screen ( TAL DEPTH - ST				EQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)			
ONE WELL VOLUME	OLOME - (10	TAL DEF III - 31	1/4 WELL VOLUME	X WELL CAP	ICITY -	3 WELL VOLUMES			5 WELL VOLUMES		:			
		EQUIPMENT VO	DLUME = PUM	1P VOLUME +	· (TUBING CAI	PACITY X TUI	BING LEGNTH	l) + FLOW CEL	L VOLUME					
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME					
INITIAL TUBII IN WELL	l l		FINAL TUBII IN WELL	NG LEGNTH _ (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED				
INST. ID	$\geq$	>	$\geq$	$\geq$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM-					
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (∆ <0.2)	SP COND (uS/cm) (∆ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)			
P:55	ı	1.75			5.35	22.2	302	2.61						
9:00	175	1.75			5.26	22.9	300	1.13						
	:													
					:									
T. 101		apacity (gallons/f							,	"5.88	2.010			
TOBIN	IG INSIDE DIA	. CAPACITY (Ga	I./Ft.): 1/8" =		= 0.0014; 1/ AMPLIN			1; 3/8" = 0.00	6; 1/2" = 0.0	010; 5/8" = 0	0.016			
SAMPLED BY	/ COMPANY			3/	HIVIPLIN		LER(S)	<u> </u>		4.				
(PRI		Joxfru	Must		. * ''		TURÈS:	Gosel	ri His	<i>K</i>				
TUBING MAT		PP PE NF	TL TT		TUBING WELL (FEET)			SAMPLE PU RATE (n						
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	ΥN	CLEANING STEPS								
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	Y N		ECTED BY E FLOW?	Y N N/A		COLLECTED 6H TRAP?	Y N N/A			
PRESER CHECKED	1	Y N N/A		ERVATIVES DED										
WEAT CONDI														
СОММ	ENTS													
								-place Bladder		a.				
Po	TUB viewed By:	ING MATERIAL (	CODES: PP=	Polypropylene	, PE= Polyeth	ylene, NP= N	on-inert Plastic Date:	c, TL= Teflon L	ined, TT= Te	tion				
	wieweu by.						Date.							

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### **GROUNDWATER SAMPLING LOG**

Client Name:	Hazan and Sawyer	Location:		Contact:									
Client Ivaine.	riazan and Sawyer	Location.		Phone:									
Date Sampled	12/10/10	SAL Project #	1003007-33	Project Name	GCREC Mound Groundwater Analyses								
Well Number		Sample ID	DM C- 7 40	GPS LAT									
Well Nulliber		Sample ID	DP-G07-27	GPS LONG	·								

### **PURGING DATA**

				Р	URGING	DAIA					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval UNK (Feet)		То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEV	GROUND WATER ELEVATION (REFERENCE-STATIC)  g Submerged Screen (1EQ)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
			, ,	/ !	· · ·	IEQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
	OLUME = (TO	TAL DEPTH - ST		x WELL CAPI	ICITY =		I	<u> </u>			
ONE WELL VOLUME	·		1/4 WELL VOLUME		3 WE VOLUM				5 WELL VOLUMES		
	1	EQUIPMENT V	DLUME = PUN	1P VOLUME +	· (TUBING CA	PACITY X TUI	BING LEGNTH	i) + FLOW CEL	L VOLUME		
PUMP VOLUME					FLOW CELL VOLUME			EQUIPMEN T VOLUME			
	TIAL TUBING LEGNTH FINAL TUBING LEGIN WELL (FEET) IN WELL (FEET)				PURGE TIME START		PURGE TIME END		TOTAL PURGED		
INST. ID	$\times$		$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55- —	SAL-SAM-	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
9:05	$\cdot_l$	2			5,39	20.5	302	3.11			
9:15	1	2			5.19	22.5	193	1.37			
						•					
		Capacity (gallons/f								'5.88	
TUBIN	NG INSIDE DIA	A. CAPACITY (Ga	l./Ft.): 1/8" =	0.0006; 3/16"	= 0.0014; 1/	/4" = 0.0026;	5/16" = 0.004	3/8" = 0.00	6; 1/2" = 0.0	010; 5/8" = 0	0.016

				SA	AIVIF	LIN	GDAIA	<b>\</b>							
SAMPLED BY (PRII		Josefin	His t	•			l .	LER(S) TURES:	ç	)ez	6	s H.	<u>~</u>		
TUBING MATERIAL CODE (CIRCLE ONE)		PP PE NP	TL TT	1	TUBING WELL (FEET)				SA			JMP FLOW nL/min)			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Υ	N	CLEANING STEPS						•		
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	Υ	N		ECTED BY E FLOW?	Υ	N	N/A		COLLECTED GH TRAP?	ΥN	N/A
PRESER' CHECKED		Y N N/A		ERVATIVES DED											
WEAT CONDI	—														
СОММ	ENTS														
								Pump, IBP= In	•						
		ING MATÉRIAL C	ODES: PP=	Polypropylene	, PE=	Polyeth	ylene, NP= N	on-inert Plastic	, TL:	= Te	flon L	ined, TT=Te	flon		
Re	viewed By:							Date:							

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Client Name:	Ц	azan and Sawye		Location:				Contact:				
	·····			SAL Project				Phone:				
Date Sampled	<u> </u>	10/10		#		5007		Project Name GPS LAT	GCREC Mou	ınd Groundwa	ter Analyse	
Well Number	te Sampled / =/10 / 10 ell Number DP - 6/2 - 15			Sample ID	3			GPS LONG				
				Р	URGING	DATA						
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GF IBP	
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		(REFERENC	ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)		
		omerged Screen ( TAL DEPTH - ST			rged Screen (1	EQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)	
ONE WELL	JEUNIE = (TO	IAL DEPTH - ST	1/4 WELL	X WELL CAPI	CITT-	3 WELL			5 WELL			
VOLUME	-	EQUIPMENT VO	VOLUME	AD VOLUME +	(TURING CAL	VOLUMES	RING LEGNTH	) + FLOW CEL	VOLUMES			
PUMP VOLUME		EQUIPMENT V	TUBING LEGNTH	IF VOEDWIE +	(TOBING CAI	FLOW CELL VOLUME	Sino ELONII	, · · · · · · · · · · · · · · · · · · ·	EQUIPMEN T VOLUME			
INITIAL TUBII IN WELL				NG LEGNTH _ (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED		
INST. ID	$\times$	$\overline{}$	$\times$		SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55- —	SAL-SAM- 0	$\times$	$\geq$	
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe	
0976					4.7	223	509	0.89				
				1.05#	0.00	10 21-0 27	, 4"=0.65,	5"=1.02.	5"=1.47. 12	"5.88		
TUBII		Capacity (gallons/			· · · · · · · · · · · · · · · · · · ·		5/16" = 0.00				0.016	
					AMPLIN		<del>_</del>					
	/ / COMPANY INT)						PLER(S) ATURES:	Juy !	Wrl			
	ERIAL CODE E ONE)	PP PE N	P TL TT		E TUBING WELL (FEET)			1	UMP FLOW mL/min)			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	YN	CLEANING STEPS			TSEMILVOIS	COLLECTER	<del></del>	
FIELD FILTERED?	Y N	FILTER SIZE (μm)	LIST DDC	DUPLICATE	YN		LECTED BY SE FLOW?	Y N N/A		GH TRAP?	YNN	
	RVATION IN FIELD?	Y N N/A	· ·	DED				<u> </u>				
	THER ITIONS		Clerin									
COM	MENTS											

Date:

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## **GROUNDWATER SAMPLING LOG**

			GF	ROUND	NATER	SAMPL	ING LOC	<del>j</del>					
Client Name:	ŀ	Hazan and Sawye	er	Location:				Contact: Phone:					
Date Sampled	12/1	10/10		SAL Project	100	3007	:	Project Name	GCREC Mo	und Groundwa	ater Analyses		
Well Number	DP-	G12-	21	# Sample ID		<u>500 i</u> 55		GPS LAT					
	01	<del></del>		P	URGINO			GPS LONG					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP		
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEV (REFEREN	O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)			
		bmerged Screen TAL DEPTH - ST			rged Screen (1 ICITY =	EQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)		
ONE WELL VOLUME			1/4 WELL VOLUME			3 WELL VOLUMES			5 WELL VOLUMES				
		EQUIPMENT V	1	/IP VOLUME +	+ (TUBING CAI		BING LEGNTH	I) + FLOW CEL					
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME				
INITIAL TUBII IN WELL				NG LEGNTH _ (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED			
INST. ID	><	><	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM-	><	><		
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) ( $\Delta$ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)		
0952					4,9	22:7	636	0,99		,			
	Well C	apacity (gallons/f	oot): 0.75"=0.	02, 1.25"=0	0.06, 2"=0.1	6, 3"=0.37,	4"=0.65,	5"=1.02, 6	=1.47, 12"	5.88			
TUBIN		. CAPACITY (Ga	,	•			5/16" = 0.004				0.016		
				S	AMPLIN	G DATA	\			·			
SAMPLED BY (PRI	i i						LER(S) TURES:	Long	Wood	<i></i>			
TUBING MATI (CIRCLE		PP PE NF	P TL TT	LEGNTH IN	TUBING WELL (FEET)			SAMPLE PL RATE (n					
SAMPLING INITIATED FIELD		SAMPLING ENDED FILTER SIZE		FIELD CLEANED	Y N	STEPS	ECTED BY		SEMI VOLS	COLLECTED			
FILTERED?	Y N	(μm)		DUPLICATE	ΥN		E FLOW?	Y N N/A		H TRAP?	Y N N/A		
PRESER CHECKED		Y N N/A		ERVATIVES DED									
WEAT CONDI	1												
СОММ	ENTS												
	TUR	PUMP CO						-place Bladder :. TL= Teflon L	-	lon			
Re	Reviewed By:							Date:					

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		GROUNDY	VATER S	SAMPL	ING LO	G			
Client Name:	Hazan and Sawyer	Location:				Contact:			
Chefit Name.	riazan anu Sawyei	Location.				Phone:			
Date Sampled	12/10/10	SAL Project #	10030	007		Project Name	GCREC M	ound Groundwa	ater Analyses
Well Number	ND 4/2 1-	Sample ID	0	1		GPS LAT			
Well Halliber	DP 612.27	Oample 1D	<u> </u>	$\varphi$		GPS LONG			
		Р	URGING	DATA					_
WELL	WELL	Screen				Static Depth		PURGE	PP GP
DIAMETER	CAPACITY	Interval	UNK	То	UNK	to Water		PUMP	IBP

			<u> </u>			Ψ		GF3 LONG			
				P	URGING	<b>DATA</b>					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		GROUNE ELEV (REFEREN			-	TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		bmerged Screen TAL DEPTH - ST				EQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	OLUME = (10	TAL DEPTH - ST	1/4 WELL VOLUME	X WELL CAPI	CITY -	3 WELL VOLUMES			5 WELL VOLUMES		
		EQUIPMENT VO	DLUME = PUM	IP VOLUME +	(TUBING CA	PACITY X TUI	BING LEGNTH	I) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBI IN WELL	NG LEGNTH (FEET)		FINAL TUBII IN WELL			PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID	$\times$	><	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\times$	$\searrow$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
10.08					4.7	23.1	509	0.45			
TURN		Capacity (gallons/l						5"=1.02, 6 4; 3/8" = 0.00		"5.88 010: 5/8" = 1	0.016
, i UBII	AG INSIDE DI	a. CAPACITI (Ga	11.71 t.). 170 -	0.0000, 3/10	- 0.00 14, I	74 - U.UUZU,	5/10 - 0.00	T, 5/0 - 0.00	0, 1/2 - 0.	0.0, 0.0 -	5.510

				SF	AMPLIN	G DAIA	L.					
SAMPLED BY / COM (PRINT)	IPANY					SAMPI SIGNAT	` '	Z	n u	led		
TUBING MATERIAL (CIRCLE ONE		PP PE NF	> TL TT	SAMPLE LEGNTH IN V	TUBING WELL (FEET)			SAMPLE PL RATE (n				
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	ΥN	CLEANING STEPS						
FIELD Y	N	FILTER SIZE (μm)		DUPLICATE	ΥN	VOC COLL REVERS	ECTED BY E FLOW?	Y N N/A		COLLECTED SH TRAP?	ΥN	N/A
PRESERVATIO CHECKED IN FIE		Y N N/A		SERVATIVES DED								
WEATHER CONDITION												
COMMENTS	3											
								-place Bladder				
	TUB	ING MATERIAL (	CODES: PP=	Polypropylene	, PE= Polyeth	ylene, NP= N		T	ined, TT= Te	tion		
Reviewe	ed By:						Date:	1				

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

## **GROUNDWATER SAMPLING LOG**

Client Name:	,							Contact: Phone:			
Date Sampled	12/10	ļio .		SAL Project #	1003	3007-	-37	Project Name	GCREC Moi	und Groundwa	ater Analyses
Well Number	•			Sample ID	DP-IO	3007- 6-14		GPS LAT GPS LONG			
		<del>, , , , , , , , , , , , , , , , , , , </del>		Р	URGINO				· · · · · · · · · · · · · · · · · · ·		
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEV	D WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
Purge Tec	chnique: q Su	bmerged Screen TAL DEPTH - ST	(1,1/4,1/4 Well	) q Subme	rged Screen (1	IEQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	OLOME = (10		1/4 WELL VOLUME		, , , , , , , , , , , , , , , , , , , ,	3 WELL VOLUMES			5 WELL VOLUMES		
		EQUIPMENT VO		1P VOLUME +	(TUBING CA	l	BING LEGNTH	I) + FLOW CEL			
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBI IN WELL				NG LEGNTH _ (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST.	$\times$	><	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM-	><	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
4:10	4				5,25	20.4	240	1.66			
TURIN		Capacity (gallons/f A. CAPACITY (Ga								'5.88 )10; 5/8" = (	0.016
10011	TO INCIDE DI	1. 0/1 /10/17 (04	1.71 1.72		AMPLIN			., 0.0 0.00	<u> </u>		
SAMPLED BY (PRI		Joseph	Hirst			SAMP	LER(S) TURES:	Jose	gi Her	st	
TUBING MAT (CIRCLI		PP PE NE	P TL TT		E TUBING WELL (FEET)			SAMPLE PU RATE (n			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Y N	CLEANING STEPS			I		
FIELD FILTERED? PRESER	YN	FILTER SIZE (μm)	LIST DDES	DUPLICATE ERVATIVES	YN		ECTED BY	Y N N/A		COLLECTED SH TRAP?	Y N N/A
CHECKED		Y N N/A		DED							
CONDI			-								
COMM	MENTS										
								-place Bladder		flon	
D.	TUE	BING MATERIAL (	JUDES: PP=	Polypropylene	e, PE= Polyeth	iyiene, NP= N	lon-inert Plastic		meu, TT= Tef	IIUII	

Date:

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

## **GROUNDWATER SAMPLING LOG**

Client Name:		lazan and Sawye		Location:				Contact:			
Client Name:								Phone:			
Date Sampled	12/10	10		SAL Project #	1003	007 - 06- a0	38	Project Name	GCREC Mo	und Groundwa	iter Analyses
Well Number				Sample ID	DP-I	06- A0		GPS LAT			
				Р	URGINO	DATA	<u></u>	0.020110			
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		GROUNI ELEV	D WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)	5/16"	TUBING CAPACITY (gal/ft)	
Purge Tec	hnique: a Su	bmerged Screen	[ (1,1/4,1/4 Well	l '	•	IEQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scre	,	minutes)
WELL V		TAL DEPTH - ST	ATIC DEPTH)				1				
ONE WELL VOLUME		EQUIPMENT V	1/4 WELL VOLUME	AD VOLUME	L (TUBING CAI	3 WELL VOLUMES	RING LEGNTH	1) + FLOW CEL	5 WELL VOLUMES		
PUMP VOLUME		EQUIPMENT V	TUBING LEGNTH	IF VOLUME 1	F (TOBING CAI	FLOW CELL VOLUME		I) T LOW OLL	EQUIPMEN T VOLUME		
INITIAL TUBI IN WELL				NG LEGNTH _ (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID		>		$\nearrow$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
7:22	ļ	1.5			5.07	21-1	359	1.98			
7:25	0.5	1.5			5. 03	21.4	367	1.80			
		,									
TUBII		Capacity (gallons/f		0.0006; 3/16		/4" = 0.0026;	5/16" = 0.004	5"=1.02, 6 4; 3/8" = 0.00	•	"5.88 010; 5/8" = 0	).016
SAMPLED BY	//COMPANY	h 0				SAMP	LER(S)	0		* 4	
TUBING MAT	ERIAL CODE E ONE)	PP PE NI	P TL TT	SAMPLE	E TUBING WELL (FEET)		TURES:	SAMPLE PU RATE (r			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	YN	CLEANING STEPS					
FIELD FILTERED?	Y N	FILTER SIZE (μm)	LICT PRES	DUPLICATE	YN		LECTED BY SE FLOW?	Y N N/A		COLLECTED SH TRAP?	Y N N/A
	RVATION IN FIELD?	Y N N/A	1	ERVATIVES DED							
	THER ITIONS										
COMN	1ENTS										
								-place Bladder		flon	
	TUB	ING MATERIAL (	JODES: PP=	Polypropylene	e, PE= Polyeth	iyiene, NP= N	Ion-inert Plasti		meu, II=Ie	non	

Date:

# **SOUTHERN ANALYTICAL LABORATORIES, INC.** 110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

## **GROUNDWATER SAMPLING LOG**

					· · · · · · · · · · · · · · · · · · ·				<del>,</del>		
Client Name:	1	Hazan and Sawy	er	Location:				Contact: Phone:			
Date Sampled	12/10	110		SAL Project #	1003	3007-	- 39	Project Name		und Groundwa	ater Analyses
Well Number				Sample ID	DP- 40	06-a6	* .	GPS LAT			
	l			Р	URGINO			GF3 LONG	l		
WELL	1	387511	1	<del>,</del>	1			T 01 11 15 11	T	DUDGE	
		WELL		Screen	]	_		Static Depth	İ	PURGE	PP GP
DIAMETER		CAPACITY	ŀ	Interval	UNK	То	UNK	to Water		PUMP	IBP
(Inches)		(gal/ft)		(Feet)				(Feet)	·	CODE	
1.		REFERENCE		GROUNI	D WATER			TUBING	_,	TUBING	
TOTAL WELL		ELEVATION		I .	ATION	]		DIAMETER	7/16"	CAPACITY	
DEPTH (Feet)		(NGVD)			CE-STATIC)			(Inches)	110	(gal/ft)	
<u> </u>		, ,	(4.444.444.44	1		<u></u>		, ,			L ,
		bmerged Screen			rged Screen (1	IEQ Volume, :	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
	OLUME = (10	TAL DEPTH - ST	, , , , , , , , , , , , , , , , , , ,	X WELL CAP	ICITY =		<del></del>				
ONE WELL			1/4 WELL			3 WELL			5 WELL		
VOLUME			VOLUME			VOLUMES			VOLUMES		
		EQUIPMENT V	OLUME = PUN	IP VOLUME +	+ (TUBING CA	PACITY X TU	BING LEGNTH	1) + FLOW CEL	L VOLUME		
		,				1	T	4	· ·		
PUMP			TUBING			FLOW CELL			EQUIPMEN		
VOLUME			LEGNTH			VOLUME			T VOLUME		
					T			· · · · · · · · · · · · · · · · · · ·			
INITIAL TUBI				NG LEGNTH		PURGE		PURGE TIME		TOTAL	•
IN WELL	. (FEET)		IN WELI	L (FEET)		TIME START	-	END		PURGED	
			$\overline{}$	$\overline{}$	+						
INST.					SAL-SAM-63		SAL-SAM-63	SAL-SAM-55-	SAL-SAM-		
ìD						65			0		
		TOTAL	<u> </u>								
į	VOLUME	VOLUME	PURGE	Depth to	pН	TEMP	SP COND	DO	TURBIDITY	601.00	0000
TIME	PURGED			Water	(SU)	(oC)	(uS/cm)	(mg/L)	(NTUs)	COLOR	ODOR
Ì	(Gallons)	PURGED	RATE (gpm)	(Feet)	(∆ <0.2)	(∆ <0.2)	(∆ <5%)	(% SAT <20)	(<20 NTU)	(Describe)	(Describe)
	, ,	(Gallons)		` ′	(	,	(	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	, , ,		
7: 3Y	l	2			5.11	20.2	31(	2-63			
7:46	1 1	2			5.01	21.3	302	2.36			
	Well C	apacity (gallons/f	foot): 0.75"=0.	02, 1.25"=0	0.06, 2"=0.1	6, 3"=0.37	, 4"=0.65,	5"=1.02, 6	"=1.47, 12"	5.88	
TUBIN	NG INSIDE DIA	. CAPACITY (Ga	al /Ft ): 1/8" =	0.0006: 3/16"	'= 0.0014: 1/	4" = 0.0026	5/16" = 0.004	· 3/8" = 0.00	6; 1/2" = 0.0	)10; 5/8" = (	0.016
	10 11101012 017	0/11 / (00	11.71 (.). 170	1			<del></del>	1, 0/0 0.00	0, 1/2 0.0	770, 070	3.010
				Si	AMPLIN	G DAIA	<b>\</b>				
SAMPLED BY	//COMPANY		1.1			SAMP	LER(S)	Δ			
(PRI		Jokhn	Hist				TURES:	young	- Him	1	
`				<u> </u>				, ,	,, c <b>c</b>		
TUBING MAT		PP PE NE	P TI TT	SAMPLE	TUBING			SAMPLE PL	JMP FLOW		
(CIRCLI	E ONE)	11 12 11	,,,,,	LEGNTH IN	WELL (FEET)			RATE (n	nL/min)		
CAMPLING	· · · · · · · · · · · · · · · · · · ·	CAMPLING	Т	FIELD	1	CLEANING	T				
SAMPLING		SAMPLING		FIELD	YN	CLEANING					
INITIATED		ENDED		CLEANED		STEPS	<u> </u>		1		
FIELD	YN	FILTER SIZE		DUPLICATE	YN		ECTED BY	Y N N/A		COLLECTED	Y N N/A
FILTERED?		(μm)			,	REVERS	E FLOW?		THROUG	H TRAP?	, ., ., .,
PRESER		Y N N/A	E .	ERVATIVES							
CHECKED	IN LIELD!		I ADI	DED	L		<del></del>				
WEAT CONDI											
COMM	IENTS			=							
							<del></del>	-place Bladder			
	TUD	ING MATERIAL (	CODES: PP=	Polypropylene	. PE= Polveth	vlene NP=N	on-inert Plastic	, TL= Teflon Li	ined, TT= Tef	lon	
				. отургорують	,,	yiono, iti it					
Re	eviewed By:			, отургорують	,	yiono, iti it	Date:		· · · · · · · · · · · · · · · · · · ·		

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1 1	UDAIV	EW BOULI			-		ING LO		B.I 9-00'	0-2210	
Client Name:		Hazan and Sawye		Location:				Contact:	<u> </u>		
Date Sampled	101	9/10		SAL Project	100	1211	1	Phone: Project Name	<del> </del>	und Groundwa	ater Analyses
Well Number	101	1-14		# Sample ID		1300- 17)	7	GPS LAT			atti Anaiyoot
vveii (vuilibei	301	- 19		,	URGINO	<u>· · · · · · · · · · · · · · · · · · · </u>		GPS LONG			
NA/E-LI	<del></del>	T VALET I	_	,	UKGING	DATA		Court Down		BUDGE	
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)	<u> </u>	REFERENCE ELEVATION (NGVD)		ELEV (REFEREN	O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		bmerged Screen TAL DEPTH - ST				IEQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3 [	minutes)
ONE WELL VOLUME		· -	1/4 WELL VOLUME			3 WELL VOLUMES			5 WELL VOLUMES	<del>-</del>	<u> </u>
VOLUME	<u> </u>	EQUIPMENT V	i .	I MP VOLUME +	· (TUBING CA		L BING LEGNTH	I) + FLOW CEL			
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBI IN WELL				NG LEGNTH _ (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID	$\times$	$\times$	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
1320					4.5	21.4	232.1	3.29			
	_										
TUDIA		apacity (gallons/f	,	•						5.88	0.40
TOBIN	IG INSIDE DIF	CAPACITT (Ga	II./Ft.): 1/0 =		= 0.0014; 1/ AMPLIN		5/16" = 0.004	; 3/8" = 0.000	6; 1/2" = 0.0	010; 5/8" = 0	0.016
SAMPLED BY	/ COMPANY				ZIAII FIIA		LER(S)	<u> </u>		<del>.</del>	
(PRI	NT)					1	TURÈŚ:				
TUBING MATI (CIRCLE		PP PE NF	P TL TT		TUBING WELL (FEET)			SAMPLE PU RATE (m			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	ΥN	CLEANING STEPS					
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	ΥN	VOC COLL REVERS	ECTED BY E FLOW?	Y N N/A	SEMI-VOLS ( THROUG		Y N N/A
PRESER CHECKED		Y N N/A	LIST PRESE ADD								
WEAT CONDI											
СОММ	ENTS										
	TUB	PUMP COI						place Bladder I , TL= Teflon Li		lon	
Po	viewed By		<u>.</u>	71 [-7	,,,,	, ,	Deter		-,	<del></del>	

Date:

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TOTAL   TUBING   LEGNTH   FINAL TUBING LEGNTH   TUBING   LEGNTH   TUBING   LEGNTH   TUBING   LEGNTH   TUBING   LEGNTH   TOTAL   PURGE   PURG				GR	OUNDW	ATER S	SAMPLI	NG LOG	· •			
See Number   109 - 20	Client Name:	Ha	azan and Sawyer		Location:							
### CPS LAT   GPS LAT   GP	ate Sampled	709	-17/12/	19/10		100	300	7		GCREC Mou	nd Groundwa	er Analyses
WELL   WELL   WELL   Screen   UNK   To   UNK   Stafe Depth   PURGE   PP   Concept   CAPACITY   Ca	Vell Number	509	- 20		Sample ID	1	1)					
DAMPETER   CAPACITY   Interval   UNK   To   UNK   UNK   To   UNK   UNK   To	<del></del>		<del></del>	· · · · · · · · · · · · · · · · · · ·	Pl	URGING	DATA					
Commonstration					<b>I</b>		_	1.15.114			I	PP GP
DYAL   WELL   REFERENCE   REVENTION   CHARGE	- 1	ļ	1	ļ	1	UNK	10	UNK	1		1	IBP
DIAMETER   CAPACITY (gality)   Purgs Technique: q. Submireged Screen (1.14, 14.4 Web): q. Subm	(mones)					WATER					TUBING	
Purge   Technique   q Submerged Screen (1.14,14 Well)   q Submerged Screen (1EQ Volume, 3, 3 Minutes)   q Pattally Submerged Screen (1 Well, 3,3 minutes)	OTAL WELL		4			· ·			· ·	Ì		
WELL   VOLUME   TOTAL   DEPTH   STARTO DEPTH   WELL   CAPICITY   SAMPLE   VOLUME	EPTH (Feet)		(NGVD)		•				, ,			
14 WELL   VOLUME	Purge Tecl	hnique: q Sub	merged Screen (	1,1/4,1/4 Well)	q Submer	ged Screen (1	EQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
VOLUME		OLUME = (10	IAL DEPTH - ST		X VVLLL OAI I	OIII	3 WELL			5 WELL		
FUND			Į	VOLUME			VOLUMES					
DUBING   PURPLY   P			EQUIPMENT VO	DLUME = PUN	P VOLUME +	(TUBING CAI	PACITY X TUE	BING LEGNTH	I) + FLOW CEL	L VOLUME		
NTIAL TUBING LEGNTH   NWELL (FEET)							. –					
Note												
Time			X	X	$\times$	SAL-SAM-63	l .	SAL-SAM-63	SAL-SAM-55- 	1	$\times$	$\geq$
1330   1,577	TIME	PURGED	VOLUME PURGED	1	Water	(SU)	(oC)	(uS/cm)	(mg/L)	(NTUs)	1 -	ODOR (Describe
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016   SAMPLED BY / COMPANY (PRINT)	132V		(3410.10)			4.9	23.7	338:1	1.57			
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016   SAMPLED BY / COMPANY (PRINT)												
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016   SAMPLED BY / COMPANY (PRINT)						<u></u>				011 4 4 77 4 4 7	our oo	
SAMPLED BY / COMPANY (PRINT)  TUBING MATERIAL CODE (CIRCLE ONE)  SAMPLING  SAMPLED BY / COMPANY (PRINT)  TUBING MATERIAL CODE (CIRCLE ONE)  SAMPLED BY / COMPANY (PRINT)  TUBING MATERIAL CODE (CIRCLE ONE)  SAMPLED BY / COMPANY (PRINT)  TUBING MATERIAL CODE (CIRCLE ONE)  SAMPLED BY / COMPANY (PRINT)  TUBING MATERIAL CODE (CIRCLE ONE)  SAMPLED BY / N (LEANING STEPS)  SAMPLED BY N (LEANING STEPS)  THELD Y N FILTER SIZE (LIM)  PRESERVATION CHECKED IN FIELD?  WEATHER CONDITIONS  COMMENTS  PUMP CODES: PP=Peristaltic Pump, GP= Submersible Grundfos Pump, IBP= In-place Bladder Pump  TUBING MATERIAL CODES: PP= Polypropylene, PE= Polyethylene, NP= Non-inert Plastic, TL= Teflon Lined, TT= Teflon		Well	Capacity (gallons	/foot): 0.75"=0	1.02, 1.25"=				0 110-1			0.016
SAMPLED BY / COMPANY (PRINT)  TUBING MATERIAL CODE (CIRCLE ONE)  PP PE NP TL TT  SAMPLE TUBING LEGNTH IN WELL (FEET)  SAMPLER(S) SIGNATURES:  SAMPLE PUMP FLOW RATE (mL/min)  SAMPLING INITIATED  SAMPLING ENDED  FIELD FILTER SIZE (µm)  PRESERVATION CHECKED IN FIELD?  Y N N/A  LIST PRESERVATIVES ADDED  WEATHER CONDITIONS  COMMENTS  PUMP CODES: PP=Peristattic Pump, GP= Submersible Grundfos Pump, IBP= In-place Bladder Pump  TUBING MATERIAL CODES: PP= Polypropylene, PE= Polyethylene, NP= Non-inert Plastic, TL= Teflon Lined, TT= Teflon	TUB	ING INSIDE DI	A. CAPACITY (G	al./Ft.): 1/8" =	0.0006; 3/16	S" = 0.0014;	1/4" = 0.0026;		J4; 3/6 - 0.0	00, 1/2 - 0	.010, 0.0	
SAMPLED BY / COMPANY (PRINT)  TUBING MATERIAL CODE (CIRCLE ONE)  PP PE NP TL TT SAMPLE TUBING LEGNTH IN WELL (FEET)  SAMPLING SAMPLING ENDED  FIELD FIELD Y N FILTER SIZE (µm)  PRESERVATION CHECKED IN FIELD?  WEATHER CONDITIONS  COMMENTS  PUMP CODES: PP=Peristaltic Pump, GP= Submersible Grundfos Pump, IBP= In-place Bladder Pump  TUBING MATERIAL CODES: PP= Polygropylene, PE= Polygthylene, NP= Non-inert Plastic, TL= Teflon Lined, TT=Teflon					S	AMPLIN						
TUBING MATERIAL CODE (CIRCLE ONE)  PP PE NP TL TT SAMPLE TUBING LEGNTH IN WELL (FEET)  SAMPLING SAMPLING ENDED CLEANED Y N STEPS INITIATED V N FILTER SIZE (µm) DUPLICATE Y N REVERSE FLOW? Y N N/A SEMI-VOLS COLLECTED BY REVERSE FLOW? Y N N/A SEMI-VOLS COLLECTED Y N N/A DUPLICATE Y N N/A SEMI-VOLS COLLECTED Y N			′									
SAMPLING ENDED CLEANED Y N CLEANING STEPS  FIELD FIELD Y N FILTER SIZE (µm) DUPLICATE Y N REVERSE FLOW? Y N N/A THROUGH TRAP? Y N N/A CONDITIONS  WEATHER CONDITIONS  COMMENTS  PUMP CODES: PP=Peristaltic Pump, GP= Submersible Grundfos Pump, IBP= In-place Bladder Pump  TUBING MATERIAL CODES: PP= Polypropylene, PE= Polyethylene, NP= Non-inert Plastic, TL= Teflon Lined, TT= Teflon	TUBING MA	TERIAL CODE	PP PE N	NP TL TT								
FILTERED?  FILTER SIZE (µm)  PRESERVATION CHECKED IN FIELD?  WEATHER CONDITIONS  COMMENTS  PUMP CODES: PP=Peristaltic Pump, GP= Submersible Grundfos Pump, IBP= In-place Bladder Pump  TUBING MATERIAL CODES: PP= Polypropylene, PE= Polyethylene, NP= Non-inert Plastic, TL= Teflon Lined, TT= Teflon						Y N		3				
FILTERED?  PRESERVATION CHECKED IN FIELD?  WEATHER CONDITIONS  COMMENTS  PUMP CODES: PP=Peristaltic Pump, GP= Submersible Grundfos Pump, IBP= in-place Bladder Pump  TUBING MATERIAL CODES: PP= Polypropylene, PE= Polyethylene, NP= Non-inert Plastic, TL= Teflon Lined, TT= Teflon				1	+				Y N N/A	SEMI-VOL	S COLLECTE JGH TRAP?	N Y D
CHECKED IN FIELD?  WEATHER CONDITIONS  COMMENTS  PUMP CODES: PP=Peristaltic Pump, GP= Submersible Grundfos Pump, IBP= In-place Bladder Pump  TUBING MATERIAL CODES: PP= Polypropylene, PE= Polyethylene, NP= Non-inert Plastic, TL= Teflon Lined, TT= Teflon	FILTERED?	?	I				REVER	(SE PLOW!		118100		
WEATHER CONDITIONS  COMMENTS  PUMP CODES: PP=Peristaltic Pump, GP= Submersible Grundfos Pump, IBP= In-place Bladder Pump  TUBING MATERIAL CODES: PP= Polypropylene, PE= Polyethylene, NP= Non-inert Plastic, TL= Teflon Lined, TT= Teflon	PRESE	RVATION D IN FIELD?	Y N N/A			<u> </u>					·	
PUMP CODES: PP=Peristaltic Pump, GP= Submersible Grundfos Pump, IBP= In-place Bladder Pump  TUBING MATERIAL CODES: PP= Polypropylene, PE= Polyethylene, NP= Non-inert Plastic, TL= Teflon Lined, TT= Teflon	WE	ATHER										
TUBING MATERIAL CODES: PP= Polypropylene, PE= Polyethylene, NP= Non-Inert Plastic, TE= Teriori Ellicut, TE= Terior	COM	MENTS							La miles Oles 20	or Dump		
TUBING MATERIAL CODES: PP= Polypropylene, PE= Polyethylene, NP= Non-Inert Plastic, TE= Tellor Ellios, Tell	<del></del>		PUMP C	CODES: PP=F	eristaltic Pum	p, GP= Subme	ersible Grundfo	os Pump, IBP=	In-place Bladd	er Pump n Lined. TT=	Teflon	
Reviewed By:				L CODES: PF	= Polypropyle	ne, PE= Poly	einylene, NP	- Non-mert Pla	ta'	. 211,00, , ,		

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

1 -11	UBAYVIE	EW BOULE			VATER S				B1 3-85t	5-2218	
Client Name:		Hazan and Sawyer		Location:				Contact:			
Date Sampled	12/9	1/10		SAL Project	100	300=	7	Phone: Project Name	GCREC Moi	und Groundwa	iter Analyses
Well Number	TO:	9 36		Sample ID	4;	3007 2	,	GPS LAT			
!		Ιυψ		P	URGING			GPS LUNG			
WELL	T T	WELL		Screen				Static Depth		PURGE	PP GP
DIAMETER (Inches)		CAPACITY (gal/ft)		Interval (Feet)	UNK	То	UNK	to Water (Feet)		PUMP CODE	IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEVA	O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		bmerged Screen (				EQ Volume, 3	i, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
	OLUME = (TO	TAL DEPTH - STA	ATIC DEPTH)	x WELL CAPI	CITY =	3 WELL	T		5 WELL		<u> </u>
ONE WELL VOLUME		EQUIPMENT VO	VOLUME	4D VOLUME 4	(TUDING CA	VOLUMES	BING LEGNTL	1) + ELOW CEL	VOLUMES		
		EQUIPMENT VC		IP VOLUME +	(10BING CAR		JING LEGINIE	1) + FLOW GEL		<u> </u>	
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME	<u></u>	
INITIAL TUBII IN WELL				NG LEGNTH L (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID	$\times$			$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\geq$	$\times$
TIME	VOLUME PURGED (Gallons)	PURGED VOLUME PURGE PURGED RATE (gpn			pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
1328					4.9	23.0	298,2	2.51			
		<u> </u>	<u> </u>						<u></u>		
TUDI		Capacity (gallons/f					7, 4"=0.65, 5/16" = 0.00			.010: 5/8" =	0.016
I UBIR	1G INSIDE DI	A. CAPACITY (Ga	41./Ft.): 1/8 =		AMPLIN			4, 5/0 - 0.00	0, 1/2 0.	010, 0.0	0.0.10
1	Y / COMPANY				AIVII LIIA	SAMP	PLER(S) ATURES:	T			
TUBING MAT	ERIAL CODE E ONE)	PP PE NI	P TL TT		E TUBING WELL (FEET)		TORLO.	-	UMP FLOW mL/min)		
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Y N	CLEANING STEPS		<u>.l</u>			
FIELD FILTERED?	YN	FILTER SIZE (µm)		DUPLICATE	YN	VOC COL	LECTED BY SE FLOW?	Y N N/A		COLLECTED GH TRAP?	Y N N/A
PRESER	RVATION ) IN FIELD?	Y N N/A		SERVATIVES DDED							
i e	THER ITIONS										
COMN	MENTS					" Committee	D IBO- I	- stoop Pladde	- Dumn		
	TI II	PUMP CO	)DES: PP=Pe	ristaltic Pump.	, GP= Submer	sible Grundtos	Non-inert Plast	n-place Bladder tic. TL= Teflon I	Lined, TT= T	eflon	

TUBING MATERIAL CODES: PP= Polypropylene, PE= Polyethylene, NP= Non-inert Plastic, TL= Teflon Lined, TT= Teflon

Date:

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### GROUNDWATER SAMPLING LOG

		CITOOIIDII	ATEN SAMIFLING L	00	
Client Name:	Hazan and Sawyer	Location:		Contact:	
	- Ideal and Gawyer	Location.		Phone:	
Date Sampled	12/9/10	SAL Project #	1003007	Project Name	GCREC Mound Groundwater Analyses
Well Number	512-15	Sample ID	43	GPS LAT GPS LONG	

## **PURGING DATA**

				P	URGING	DATA					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		GROUND ELEVA (REFERENC	ATION			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		bmerged Screen		<u> </u>	<u> </u>	EQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
	OLUME = (TC	TAL DEPTH - ST		x WELL CAPI	CITY =						L
ONE WELL VOLUME	<u> </u>		1/4 WELL VOLUME			3 WELL VOLUMES			5 WELL VOLUMES		
		EQUIPMENT V	DLUME = PUN	1P VOLUME +	(TUBING CAI	PACITY X TUE	BING LEGNTH	) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBI				NG LEGNTH L (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST.	$\times$		$\times$	$\supset$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\geq$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
12:28					4.8	23.1	287.5	1.50			
	1		(f- p-k): 0.75"-0	1.02. 1.25"=	0.06. 2"=0.	16. 3"=0.37	'. 4"=0.65.	5"=1.02.	<u> </u> 6"=1.47, 12	2"5.88	1
71.171	Well	Capacity (gallons, IA. CAPACITY (G	root): U./5"=0	.uz, 1.25°=			5/16" = 0.00		,		0.016
LOBI	NG INSIDE D	IA. CAPACITY (G	ai./i=t.j. 1/0 =			0.0026,		-,			

				SA	MPLIN	G DATA	<u> </u>					
SAMPLED BY (PRII						ľ	LER(S) TURES:					
TUBING MATE (CIRCLE		PP PE NP	TL TT	SAMPLE LEGNTH IN V				SAMPLE PL RATE (n				
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	ΥN	CLEANING STEPS						
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	ΥN		ECTED BY E FLOW?	Y N N/A		COLLECTED GH TRAP?	ΥN	I N/A
PRESER' CHECKED		Y N N/A		ERVATIVES DED		,, <u>,,</u>		·				
WEAT CONDI												
COMM	IENTS											
<del></del>		PUMP CO	DES: PP=Pe	eristaltic Pump,	GP= Submers	sible Grundfos	Pump, IBP= Ir	n-place Bladder	Pump	oflon		_
	TUE	BING MATERIAL (	CODES: PP=	Polypropylene	, PE= Polyeth	nylene, NP= N			_mea, 11=10	SHOT		
Re	eviewed By						Date	. <u> </u>				

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## **GROUNDWATER SAMPLING LOG**

Client Name:		Hazan and Sawy	/er	Location:				Contact Phone			
Date Sampled		· · · · · · · · · · · · · · · · · · ·	<del></del>	SAL Projec	100	3007	ļ.	Project Name		ound Groundw	ater Analys
Well Number	5-1	2-20		Sample ID		14		GPS LAT			
L				 1	PURGIN	G DATA	<del></del>	1 GPS LONG	<u> </u>	<del>-1-1-1</del>	
WELL	<del></del>	WELL	<del></del>		7	<u> </u>	·	Ct-ti- D-+th	<del></del>	- BURGE	
DIAMETER	1	CAPACITY	1	Screen Interval	UNK	Τ-	LINUZ	Static Depth	l l	PURGE	PP G
(Inches)	İ	(gal/ft)	1		UNK	То	UNK	to Water	<b>J</b>	PUMP	IBP
(mones)	<del> </del>	(gai/it)	+	(Feet)	4			(Feet)	<del> </del>	CODE	
TOTAL WELL	)	REFERENCE	(	GROUN	ID WATER	l		TUBING	Ì	TUBING	
DEPTH (Feet)		ELEVATION	I		NOITAV	1		DIAMETER	}	CAPACITY	9
(. 55.)	1	(NGVD)		(REFERE	NCE-STATIC)	[		(Inches)		(gal/ft)	ł
Purge Ted	chnique: q S	ubmerged Screer	1 (1,1/4,1/4 We	ell) q Subm	erged Screen (	1EQ Volume,	3, 3 Minutes)	q Partially Su	bmerged Scre	en (1 Well, 3,3	minutes)
	OLUME = (TO	OTAL DEPTH - S		1) x WELL CAI	PICITY =	<del> </del>	<del>,                                      </del>	L	<u> </u>		<u> </u>
ONE WELL	1		1/4 WELL	1		3 WELL	}		5 WELL	j	
VOLUME	<u> </u>		VOLUME			VOLUMES	<u> </u>		VOLUMES		
<del></del>	<del></del>	EQUIPMENT \	OLUME ≈ PU	MP VOLUME	+ (TUBING CA	APACITY X TU	BING LEGNTI	H) + FLOW CEL	L VOLUME	<del></del>	
PUMP	1		TUBING	1		FLOW CELL	.]		EQUIPMEN	i	
VOLUME	l		LEGNTH			VOLUME	1		TVOLUME	ļ	
<b> </b>	L	<del></del>	<del>-}</del> -		<del></del>	+	<del> </del>	<del></del>	ļ	ļ	<del></del>
INITIAL TUBI		1	1	ING LEGNTH	}	PURGE	1	PURGE TIME	1	TOTAL	
IN WELL	. (FEET)	ł	IN WEI	LL (FEET)	1	TIME START	1	END	j	PURGED	
INST.					001 0014 00		0.11.00				
ID ID	$\times$	$\rightarrow$	$\times$	$\perp$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-		$\times$	$\times$
	$\leftarrow$			$\leftarrow$	<del> </del>	100-		<del> </del>	0		
Į.	VOLUME	TOTAL	Bubas	Depth to	l pH	TEMP	SP COND	DO	TURBIDITY		
TIME	PURGED	VOLUME PURGED	PURGE	10/2422	(SU)	(oC)	(uS/cm)	(mg/L)	(NTUs)	COLOR	ODOR
1	(Gallons)	(Gallons)	RATE (gpm	(Feet)	(∆ <0.2)	(∆ <0.2)	(∆ <5%)	(% SAT <20)	(<20 NTU)	(Describe)	(Describe
ļ	<del> </del>	(Gallotis)	<del> </del>	<del></del>	<del> </del>	<del> </del>	<del> </del>		<b> </b>		ļ
1239	,				15.0	22.9	342.9	1113			}
100		<del> </del>	<del>                                     </del>	+	<del>  \ \ . \ . \ . \ . \ . \ . \ . \ . \ . </del>	100	J 100 1	×	<del> </del>	<del> </del>	
		ļ	1			1	}	1			
		<del> </del>	<del>                                     </del>	<del> </del>	<del> </del>			<del> </del>			<del></del>
j		j			ł	l				, ,	
			<u> </u>	†	<del> </del>	<u> </u>					
					ļ					j	
			<u> </u>								
		Capacity (gallons/t						5"=1.02, 6"	'=1.47, 12"	5.88	
TUBIN	G INSIDE DIA	A. CAPACITY (Ga	il./Ft.): 1/8" =	0.0006; 3/16"	= 0.0014; 1/	4" = 0.0026;	5/16" = 0.004	; 3/8" = 0.006	S; 1/2" = 0.0	10; 5/8" = 0	.016
				S	AMPLIN	G DATA					
SAMPLED BY	/ COMPANY					SAMPL	FR(S)				
(PRIN	<b>√</b> T)					SIGNAT					
TUBING MATE	RIAL CODE			CAMBLE				<del></del>			
(CIRCLE		PP PE NE	' TL TT		TUBING		ſ	SAMPLE PUI			
	3112)			LEGNIHIN	WELL (FEET)		ļ	RATE (m	L/min) [		
SAMPLING	[	SAMPLING		FIELD	YN	CLEANING		<del></del>			
INITIATED		ENDED		CLEANED		STEPS					
FIELD FILTERED?	YN	FILTER SIZE	İ	DUPLICATE	ΥN	VOC COLLE		Y N N/A	SEMI-VOLS C	OLLECTED	
PRESERV	ATION	(μm)	LIST DDCC			REVERSE	FLOW?	1 13 13//2	THROUGH	TRAP?	Y N N/A
CHECKED IN	N FIELD?	Y N N/A	LIST PRESE ADD								
							<del> </del>				
WEATH	IER										
CONDITI											
			<del></del>					<u></u>			
COMME	NTS										
3 0 , VII VI L											
		PLIMP	ES: DD-Dari-	taltia Dures - C	D= 0. 5 - 6 -						
	TUBIN	IG MATERIAL CO	DES PP= P	olypropylene	PE= Polyothy	e Grundfos Pu	mp, IBP= In-p	lace Bladder Pu	ımp		
Revi	ewed By:			олургорушене,	- E- Folyetnyk	erie, NP= Non		L= Teflon Line	ed, TT= Teflo	1	
				<del></del>			Date:				
										-	

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			GF	ROUND	<b>VATER</b>	SAMPL	ING LO	3			
Client Name:	ŀ	Hazan and Sawye	er	Location:				Contact: Phone:			
Date Sampled	12/9/5	n		SAL Project #	100	300=	7	Project Name	GCREC Mo	und Groundwa	ater Analyses
Well Number	7	12-27		Sample ID	1	300=	·• · · · · · · · · · · · · · · · · · ·	GPS LAT GPS LONG			
				Р	URGINO	1		GP3 LONG	I		
WELL		WELL		Screen				Static Depth		PURGE	
DIAMETER (Inches)		CAPACITY (gal/ft)		Interval (Feet)	UNK	То	UNK	to Water (Feet)		PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEV	O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		bmerged Screen TAL DEPTH - ST			rged Screen (1	EQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL	CLOIVIL - (10	TAL DEPTH-31	1/4 WELL	X WELL CAP	ICITY =	3 WELL			5 WELL		L
VOLUME		EQUIDATE LE	VOLUME	D.VOLUME	(TURNIC 04)	VOLUMES	DINIOLEONE	D - EL OVA OEL	VOLUMES		
		EQUIPMENT VO	JLUME = PUM	IP VOLUME +	(TUBING CAI		BING LEGNIF	1) + FLOW CEL			
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			T VOLUME		
INITIAL TUBI IN WELL			FINAL TUBII IN WELL			PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID	$\times$	>	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM-	$\times$	><
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (οC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
13.00					4.8	22.6	307.1	1.14			
TUDI		Capacity (gallons/ A. CAPACITY (Ga								"5.88 010: 5/8" = 1	0.016
TUBII	NG INSIDE DI	H. CAPACITT (Ga	al./Ft.). 1/0 –		AMPLIN	. –		¥, 0/0 = 0.00	10, 112 0.	010, 0,0	
SAMPLED BY	/ / COMPANY	1	<u> </u>				PLER(S)				
(PR	INT)					SIGNA	ATURES:	.,		<del></del>	
1	ERIAL CODE E ONE)	PP PE NI	P TL TT		E TUBING WELL (FEET)			SAMPLE PU RATE (r			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	YN	CLEANING STEPS		<u> </u>			
FIELD FILTERED?	YN	FILTER SIZE (μm)		DUPLICATE	YN		LECTED BY SE FLOW?	Y N N/A		COLLECTED SH TRAP?	Y N N/A
PRESE	RVATION IN FIELD?	Y N N/A		ERVATIVES DED							
1	THER ITIONS										
COMN	MENTS										
		PUMP CC	DES: PP=Pe	ristaltic Pump,	GP= Submers	sible Grundfos	Pump, IBP= Ir	n-place Bladder	Pump		
	TUE	BING MATERIAL	CODES: PP=	Polypropylene	e, PE= Polyeth	nylene, NP=1	Non-inert Plasti		_ined, TT= Te	itlon	

Date:

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1 1 (	JUATVIE	EW BOULE			VATER S				513-600	<i>ree</i> 10	
Client Name:	F	Hazan and Sawyer		Location:				Contact:			
Date Sampled	mo	7014 11	10 10)	SAL Project #	1003	3007		Phone: Project Name	GCREC Mor	und Groundwa	ater Analyses
Well Number	m 0 -	7-15	77/10	# Sample ID	100	160		GPS LAT			
	1110 1				URGING	DATA		GP3 LONG			
WELL	7	WELL		Screen				Static Depth		PURGE	PP GP
DIAMETER (Inches)		CAPACITY (gal/ft)		Interval (Feet)	UNK	То	UNK	to Water (Feet)		PUMP CODE	IBP GP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEVA (REFERENC	D WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		bmerged Screen ( TAL DEPTH - ST			rged Screen (1	EQ Volume, 3	i, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL	JEUNE - (10	TAL DEFINEST	1/4 WELL	X WELL OAL.	CITT -	3 WELL	T	+	5 WELL		
VOLUME	L		VOLUME			VOLUMES	<u> </u>		VOLUMES	<u>L</u>	
		EQUIPMENT VO	JLUME = PUN	IP VOLUME +	(TUBING CAF	PACITY X TUE	BING LEGNTH	i) + FLOW CEL			
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBIN				NG LEGNTH L (FEET)		PURGE TIME START	,	PURGE TIME END		TOTAL PURGED	
INST.					SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM-		
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
1132					4.8	22.2	304.0	0.80			
TUDI		Capacity (gallons/ A. CAPACITY (Ga					7, 4"=0.65, 5/16" = 0.004			.010; 5/8" =	0.016
TUBII	AG INSIDE DIV	A. CAPACITI (Ga	31./Ft.j. 110 -		AMPLIN			7, 0,0		0.2,	
					AIVIF LIIA		PLER(S)	<del></del>			
	Y / COMPANY RINT)					<b>I</b>	ATURES:				
TUBING MAT	TERIAL CODE LE ONE)	PP PE N	P TL TT	1	E TUBING I WELL (FEET)	)			UMP FLOW (mL/min)		
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Y N	CLEANING STEPS					
FIELD	YN	FILTER SIZE	+	DUPLICATE			LECTED BY SE FLOW?	Y N N/A		S COLLECTED IGH TRAP?	Y N N/A
	RVATION D IN FIELD?	(μm) Υ Ν Ν/Α		SERVATIVES DDED		KEVEIN	SE FLOVV:	<u> </u>	1111100	011 1100	
WEA	THER										
COM	MENTS										
		PUMP CO	DDES: PP=P€	eristaltic Pump	, GP= Submer	sible Grundfos	Pump, IBP= I	In-place Bladder	r Pump	efion	
	TUI		CODES: PP=	- Polypropylen	e, PE= Polyet	inylene, NP=	Date		Linea, TT- T	SHOTT	

Date:

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

			GR	ROUND	VATER:	SAMPL	ING LO	3			
Client Name:	ŀ	Hazan and Sawye	r	Location:				Contact: Phone:			
Date Sampled	-A119-	7 12/9/	N	SAL Project #	1003	3007		Project Name	GCREC Mo	und Groundwa	ater Analyses
Well Number		7-21		Sample ID	4	<del></del>		GPS LAT			
	7.10			P	URGINO	DATA		0.0.0010			
WELL		WELL		Screen				Static Depth	ı	PURGE	
DIAMETER (Inches)		CAPACITY (gal/ft)		Interval (Feet)	UNK	То	ŲNK	to Water (Feet)		PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEV	O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		bmerged Screen			rged Screen (1	EQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
	OLUME = (10	TAL DEPTH - ST		x WELL CAP	ICHY =						
ONE WELL VOLUME		EQUIPMENT VO	1/4 WELL VOLUME	ID VOLUME 4	TURING CAL	3 WELL VOLUMES	BING LECNT	I) + ELOW CEL	5 WELL VOLUMES		
		EQUIFIVENT V	JEUNE - FUN	IF VOLUME T	(TOBING CAI		I LEGINII	i) + I LOW CLL			
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			T VOLUME		
INITIAL TUBI			FINAL TUBII	NG LEGNTH - (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID	$\times$	$\times$	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM-	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
1147					4.9	22.5	374.9	0.58			
TUDIN		Capacity (gallons/f A. CAPACITY (Ga					, 4"=0.65, 5/16" = 0.004			"5.88 010; 5/8" = 0	0.016
ТОВП	NG INSIDE DIA	A. CAFACITI (Ga	11.77 (.). 170 -	· · · · · · · · · · · · · · · · · · ·	AMPLIN			*, 0/0 0.00	, 1/2 0.	010, 070	0.010
SAMPLED BY	//COMBANY	T	<del></del>		-X1411   -114		PLER(S)	<u> </u>			
(PR						1	TURES:				
1	ERIAL CODE E ONE)	PP PE NI	P TL TT	1	TUBING WELL (FEET)			SAMPLE PU RATE (r			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Y N	CLEANING STEPS		I		<u> </u>	
FIELD FILTERED?	YN	FILTER SIZE (μm)		DUPLICATE	ΥN		LECTED BY SE FLOW?	Y N N/A		COLLECTED 3H TRAP?	Y N N/A
	RVATION IN FIELD?	Y N N/A	_	ERVATIVES DED							
WEA <sup>-</sup> CONDI	THER ITIONS						_				
COMN	MENTS										
	THE	PUMP CC BING MATERIAL						n-place Bladder		flon	
	105	MINO WIA LERIAL	UUDES. FF-	· orypropyletti	, . L- i Oiyeu		Non-inert Flash				

Date:

-	<b>3 2</b> , 1, 1, 1	EW BOULE			WATER S				0,000	<i>J</i> <u></u> . <u>.</u> .	
Client Name:		Hazan and Sawyer	Г	Location:				Contact: Phone:			
Date Sampled	12	9/10		SAL Project #	100	3007	7	Project Name	GCREC Moi	und Groundwa	iter Analyses
Well Number	MOZ	7-27		Sample ID	1	48		GPS LAT GPS LONG			
				Р	URGING	DATA					
WELL DIAMETER		WELL CAPACITY		Screen Interval	UNK	То	UNK	Static Depth to Water		PURGE PUMP CODE	PP GP IBP
(Inches) TOTAL WELL DEPTH (Feet)		(gal/ft)  REFERENCE ELEVATION (NGVD)		ELEV	D WATER ATION ICE-STATIC)			(Feet) TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
. 1		bmerged Screen (	(1.1/4.1/4 Wel	l '		IEQ Volume, ?	3. 3 Minutes)	q Partially Sub	merged Scree		minutes)
		TAL DEPTH - ST					,				
ONE WELL VOLUME		EQUIPMENT VO	1/4 WELL VOLUME	I TO LINE	(T) 17(1)(O O A	3 WELL VOLUMES	2110 LEONT	" FLOW CEL	5 WELL VOLUMES		
PUMP VOLUME		EQUIPMENT VC	TUBING LEGNTH	AP VOLUME +		FLOW CELL VOLUME	T T	1) + FLOW CLL	EQUIPMEN T VOLUME		
INITIAL TUBII IN WELL			1	ING LEGNTH L (FEET)		PURGE TIME START	<u> </u>	PURGE TIME END		TOTAL PURGED	
INST. ID			$\overline{}$		SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0		
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
1207					4.8	23.5	301.5	0.49			
				1		25.005		100 6	1 47 10	00	
TUBI		Capacity (gallons/f A. CAPACITY (Ga		= 0.0006; 3/16	5" = 0.0014; 1	1/4" = 0.0026;	5/16" = 0.00			.010; 5/8" =	0.016
				<u>S</u>	AMPLIN	<del></del>		<del></del>			
	Y / COMPANY RINT)						PLER(S) ATURES:				
_	TERIAL CODE LE ONE)	PP PE N	P TL TT		E TUBING I WELL (FEET)	)			UMP FLOW mL/min)		
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Y N	CLEANING STEPS	<u> </u>	<del></del>	To-141 VOLC	COLLECTER	
FIELD FILTERED?		FILTER SIZE (μm)		DUPLICATE		t .	LECTED BY SE FLOW?	Y N N/A		COLLECTED GH TRAP?	Y N N/
1	RVATION D IN FIELD?	Y N N/A	1	SERVATIVES DDED							
1	THER DITIONS										
COM	ACNITO										

PUMP CODES: PP=Peristaltic Pump, GP= Submersible Grundfos Pump, IBP= In-place Bladder Pump
TUBING MATERIAL CODES: PP= Polypropylene, PE= Polyethylene, NP= Non-inert Plastic, TL= Teflon Lined, TT= Teflon

Date:

Reviewed By:

COMMENTS

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

		EW BOULE					ING LO		0,022	J , -	
Client Name:	ı	Hazan and Sawye	г	Location:				Contact: Phone:			
Date Sampled	*		· · · · · · · · · · · · · · · · · · ·	SAL Project #	1003	3007	-	Project Name	GCREC Mo	und Groundwa	ater Analyses
Well Number		NIZ	ıú	Sample ID		19		GPS LAT			
<u></u>	10 7	<i>N</i> 1 0		Р	URGING	DATA		GF3 LONG			<del>,</del>
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEV. (REFEREN	O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
Purge Ted WELL V	chnique: q Su OLUME = (TC	bmerged Screen TAL DEPTH - ST	(1,1/4,1/4 Well ATIC DEPTH)	) q Subme	rged Screen (1 ICITY =	EQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	, , ,		1/4 WELL VOLUME			3 WELL VOLUMES			5 WELL VOLUMES		
		EQUIPMENT VO	DLUME = PUN	1P VOLUME +	(TUBING CA	PACITY X TUI	BING LEGNTH	l) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		<del></del>
INITIAL TUBI IN WELL	NG LEGNTH . (FEET)		§	NG LEGNTH _ (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST.	$\times$	><	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\times$	
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (οC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
1036					5.0	22.1	148.4	1.28			
								.,			
									,		<u> </u>
		Capacity (gallons/t				·	,			"5.88 010: 5/8"	0.046
TUBII	NG INSIDE DI	A. CAPACITY (Ga	al./Ft.): 1/8" =		AMPLIN		5/16" = 0.004	4; 3/8" = 0.00	6; 1/2" = 0.	010; 5/8" =	0.016
1	/ / COMPANY INT)				AMI LIN	SAMP	PLER(S)				
TUBING MAT	ERIAL CODE E ONE)	PP PE NI	P TL TT		TUBING WELL (FEET)			SAMPLE PU RATE (r			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	ΥN	CLEANING STEPS				<u></u>	
FIELD FILTERED?	Y N	FILTER SIZE (μm)	LIOT PRES	DUPLICATE	YN	1	LECTED BY SE FLOW?	Y N N/A		COLLECTED SH TRAP?	Y N N/A
	RVATION IN FIELD?	Y N N/A		ERVATIVES DED						_	<del> </del>
I .	THER ITIONS										
COMN	MENTS			7							
		PUMP CC	DES: PP=Pe	ristaltic Pump,	GP= Submers	sible Grundfos	Pump, IBP= Ir	n-place Bladder	Pump	flon	
<u> </u>	TUI	BING MATERIAL	CODES: PP=	Polypropylene	e, PE= Polyeth	nylene, NP= N	Non-inert Plasti		unea, II= fe	HOII -	

Date:

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## **GROUNDWATER SAMPLING LOG**

			GF	KOUNDY	VAIER	SAMPL	ING LOC	7			
Client Name:	ŀ	Hazan and Sawye	er	Location:				Contact:			
Date Sampled				SAL Project	100	300	7	Phone: Project Name	GCREC Mou	und Groundwa	ater Analyses
Well Number	n l	12- 3	1	# Sample ID	100	<u> </u>	<u>'</u>	GPS LAT			
	10			P	URGINO	DATA		GPS LONG			
					ONOING	, טאוא					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEV. (REFEREN	O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		bmerged Screen TAL DEPTH - ST			rged Screen (1	EQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	DEGIME - (10	TAL DEI III-31	1/4 WELL VOLUME	X WELE CALL		3 WELL VOLUMES			5 WELL VOLUMES		
VOLUME		EQUIPMENT V	I .	I IP VOLUME +	· (TUBING CAI		I BING LEGNTH	) + FLOW CEL			
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBIN				NG LEGNTH _ (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID	$\times$	><	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (οC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
1052					4.9	22.3	304.1	1.91			
	Well C	L Capacity (gallons/	foot): 0.75"=0.	02, 1.25"=0	0.06, 2"=0.1	6, 3"=0.37,	4"=0.65,	5"=1.02, 6	"=1.47, 12"	5.88	<u></u>
TUBIN	G INSIDE DIA	A. CAPACITY (Ga	al./Ft.): 1/8" =				5/16" = 0.004	; 3/8" = 0.00	6; 1/2" = 0.0	010; 5/8" = 0	0.016
				Si	AMPLIN						
SAMPLED BY (PRII				r			LER(S) TURES:				
TUBING MATE (CIRCLE		PP PE N	P TL TT		TUBING WELL (FEET)			SAMPLE PU RATE (n			, .
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	ΥN	CLEANING STEPS	50755 51/		Toesus voi o	OOL FOTED	,e 5
FIELD FILTERED?	Y N	FILTER SIZE (μm)		DUPLICATE	YN		ECTED BY	Y N N/A		COLLECTED H TRAP?	Y N N/A
PRESER' CHECKED		Y N N/A	1	ERVATIVES DED							
	WEATHER CONDITIONS										
COMM	ENTS	BINGS 23	NDEC 22 2	intelli- D	CD- Cut-	ible Court	Dume IPD- 1	place Pladds	Pumo		
	TUR	PUMP CC ING MATERIAL						-place Bladder c, TL= Teflon L		flon	
Re	viewed By:			. ,		· · · · · · · · · · · · · · · · · · ·	Date:				

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	O BAT VIL	EW BOULE			VATER :				010-000	J-E-E 10	
Client Name:	Н	azan and Sawye	r	Location:		,		Contact: Phone:			
Date Sampled				SAL Project #	100	3007		Project Name	GCREC Mou	und Groundwa	ter Analyses
Well Number	n) 12	, - 27		Sample ID	No/10 4	5 5	1	GPS LAT			
		<u> </u>		Р	URGING	DATA	<u>'                                     </u>	<u> </u>		<u> </u>	
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEV/ (REFEREN	O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		omerged Screen ( TAL DEPTH - ST			rged Screen (1	EQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	OLUME - (10	TAL DEI III - OTI	1/4 WELL VOLUME	X VVELE O/ II	10111	3 WELL VOLUMES			5 WELL VOLUMES		
		EQUIPMENT VO	DLUME = PUM	1P VOLUME +	· (TUBING CAI	PACITY X TUI	BING LEGNTH	) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBI IN WELL				NG LEGNTH _ (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID		><	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55- —	SAL-SAM- 0	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
1194					5. U	21.4	331.4	2.45			
= 1000		Capacity (gallons/			·		, 4"=0.65, 5/16" = 0.00			"5.88 010: 5/8" =	0.016
TUBII	NG INSIDE DIA	A. CAPACITY (G	31./Ft.): 1/8" =		AMPLIN			+, 0/0 0.00	70, 172 0.	0,01	
	Y / COMPANY				AIIII LIIV	SAMF	PLER(S)	<u> </u>			C
TUBING MAT	rerial code Le one)	PP PË N	P TL TT		E TUBING WELL (FEET)		****	SAMPLE PI RATE (	UMP FLOW mL/min)		
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Y N	CLEANING STEPS			Teemi voi e	COLLECTED	Л
FIELD FILTERED?	Y N	FILTER SIZE (μm)		DUPLICATE	YN		LECTED BY SE FLOW?	Y N N/A		GH TRAP?	Y N N/A
	RVATION ) IN FIELD?	Y N N/A		ERVATIVES DED							
	THER							and the second			
COM	MENTS										-
		PUMP CC	DES: PP=Pe	ristaltic Pump	, GP= Submer	sible Grundfos	Pump, IBP= I	n-place Bladde	r Pump	eflon	
	TUE	BING MATERIAL	CODES: PP=	Polypropylen	ie, PE= Polyet	nylene, NP= l	Non-inert Plast	.l., IL- Tellon	Lineu, II-II	J.11(VI)	

Date:

	_		GR	OUNDW	VATER	SAMPLI	NG LOG	3			
Client Name:	Н	azan and Sawyer		Location:				Contact: Phone:			
Date Sampled	1 h	010-12		SAL Project	100	300=	7	Project Name	GCREC Mou	ind Groundwa	ater Analyse
Well Number	~ P.	6111 - 12		# Sample ID		12	/	GPS LAT			
VVCII I Valido		<del> </del>			URGING			GPS LONG			<del></del>
WELL		WELL	<del></del>	Screen	UKGING	DATA		Static Depth		PURGE	
DIAMETER (Inches)		CAPACITY (gal/ft)		Interval (Feet)	UNK	То	UNK	to Water (Feet)		PUMP CODE	PP G IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		GROUND ELEVA (REFERENC	ATION			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
Purge Tech	nnique: q Sub	omerged Screen (	1,1/4,1/4 Well	) q Submer	ged Screen (1	EQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	DLUME = (10	TAL DEPTH - ST	1/4 WELL VOLUME	X WELL CAPI	CITY =	3 WELL VOLUMES			5 WELL VOLUMES		<u></u>
VOLONIE 1		EQUIPMENT VO		1P VOLUME +	(TUBING CA	PACITY X TUE	BING LEGNTH	1) + FLOW CEL	L VOLUME		
PUMP VOLUME	f .		TUBING LEGNTH			FLOW CELL VOLUME		_	EQUIPMEN T VOLUME		
INITIAL TUBIN				NG LEGNTH _ (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST.	$\times$	$\times$	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM-	$\geq$	$\geq$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describ
0 945					4.3	21.1	186,4	1.31	1		ļ
	Well (	L Capacity (gallons/	foot): 0.75"=0	.02, 1.25"=						"5.88	0.016
TUBIN	NG INSIDE DI	A. CAPACITY (Ga	al./Ft.): 1/8" =				5/16" = 0.00	04; 3/8" = 0.00	06; 1/2" = 0.	010; 5/8 =	0.016
		T :		<u>S</u>	AIVIPLIN	IG DATA	PLER(S)	T			
i	( / COMPANY INT)					1	ATURES:			T	
	ERIAL CODE E ONE)	PP PE N	P TL TT	l	E TUBING WELL (FEET	)			UMP FLOW mL/min)		
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Y N	CLEANING STEPS				2011-0	al
FIELD FILTERED?	Y N	FILTER SIZE (μm)		DUPLICATE	YN		LECTED BY SE FLOW?	Y N N/A		COLLECTEI GH TRAP?	YN
	RVATION IN FIELD?	Y N N/A		SERVATIVES DDED		<del></del>					
1	THER ITIONS										
COM	MENTS										

TUBING MATERIAL CODES: PP= Polypropylene, PE= Polyethylene, NP= Non-inert Plastic, TL= Teflon Lined, TT= Teflon

Date:

# SOUTHERN ANALYTICAL LABORATORIES, INC. 110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

## GROUNDWATER SAMPLING LOG

		CITOURD	ATER OAM ENTO E		
Client Name:	Hazan and Sawyer	Location:		Contact:	
Giletti Hume.	Tiazan and Gawyer	Location.		Phone:	
Date Sampled		SAL Project #	1003007	Project Name	GCREC Mound Groundwater Analyses
Well Number	1P010-18	Sample ID	73	GPS LAT	
Trest regimeet 0	14010- 18	Sample 1D	<u> </u>	GPS LONG	
		ום	IDCINC DATA		

				P	URGING	G DATA					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)	<u></u>	REFERENCE ELEVATION (NGVD)		ELEV (REFEREN	O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		bmerged Screen				1EQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scre	en (1 Well, 3,3	minutes)
	OLUME = (TO	TAL DEPTH - ST	<u> </u>	x WELL CAP	ICITY =						
ONE WELL VOLUME			1/4 WELL VOLUME			3 WELL VOLUMES			5 WELL VOLUMES		
	T	EQUIPMENT VO	DLUME = PUN	1P VOLUME +	(TUBING CA	PACITY X TUI	BING LEGNTH	f) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBING LEGNTH IN WELL (FEET)  FINAL TUBING LEGNTH PURGE TIME END  FURGE TIME START  FOR SAM SAM SAM SAM SAM SAM SAM SAM SAM SAM											
INST. ID	$\times$	$\geq$	><	$\geq$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM-	$\times$	>
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
0958					4.8	22,7	298.4	0.77			
										-	
	M/-!! 0		0.75%								
TUDIN		apacity (gallons/fo								5.88	
LOBIN	IG INSIDE DIA	. CAPACITY (Ga	i./rt.): 1/8" = (	J.0006; 3/16"	= 0.0014; 1/	4" = 0.0026;	5/16" = 0.004	$\frac{3}{8}$ = 0.006	6; 1/2" = 0.0	5/8" = 0	.016

				O <i>r</i>	ZIALL FILL	GDAIA	•				
SAMPLED BY (PRI						1	LER(S) TURES:				
TUBING MATE (CIRCLE		PP PE NF	' TL TT	SAMPLE LEGNTH IN V	TUBING WELL (FEET)			SAMPLE PI RATE (I			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	ΥN	CLEANING STEPS					
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	ΥN	li .	ECTED BY E FLOW?	Y N N/A		COLLECTED Y	N N/A
PRESERY CHECKED		Y N N/A		ERVATIVES DED							
WEAT CONDI <sup>-</sup>	1										
СОММ	ENTS								-		
								-place Bladder			
		NG MATERIAL C	ODES: PP=	Polypropylene,	PE= Polyeth	nylene, NP= N	on-inert Plasti	c, TL= Teflon L	ined, TT= Te	flon	
Re	viewed By:						Date:				_

# SOUTHERN ANALYTICAL LABORATORIES, INC. 110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

## **GROUNDWATER SAMPLING LOG**

			G <sub>1</sub>	COND	WAIER	OAIVII L	INO LO				
Client Name:		Hazan and Sawye		Location:				Contact: Phone:			
Date Sampled				SAL Project #	100	300	7	Project Name	GCREC Mo	und Groundwa	ater Analyses
Well Number	D.D.	010-24		Sample ID		54		GPS LAT	<u> </u>		
	UI				URGINO			GPS LONG			
	· · · · · · · · · · · · · · · · · · ·	,			0110111	JUNIA					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION		ELEV	D WATER			TUBING DIAMETER		TUBING CAPACITY (gal/ft)	
Purge Ted	chnique: q Si	(NGVD) ubmerged Screen	(1,1/4,1/4 Wel		ICE-STATIC) erged Screen (1	 1EQ Volume, 3	3, 3 Minutes)	(Inches) g Partially Sub	merged Scree		minutes)
WELL V		OTAL DEPTH - ST	ATIC DEPTH)				T .				
ONE WELL VOLUME			1/4 WELL VOLUME			3 WELL VOLUMES			5 WELL VOLUMES		
		EQUIPMENT V	OLUME = PUN	IP VOLUME +	+ (TUBING CA	PACITY X TUI	BING LEGNTH	l) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBI IN WELL			4	NG LEGNTH L (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID	$\times$			$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55- —	SAL-SAM- 0	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
1014					4.2	21.8	182.2	0.44			
								. :			
	Well	L Capacity (gallons/i	foot): 0.75"=0.	02, 1.25"=0	0.06, 2"=0.1	6, 3"=0.37	, 4"=0.65,	5"=1.02, 6	"=1.47, 12'	"5.88	
TUBIN	NG INSIDE DI	A. CAPACITY (Ga	al./Ft.): 1/8" =	•	•			k; 3/8" = 0.00	6; 1/2" = 0.0	010; 5/8" = 0	0.016
				S	<u>AMPLIN</u>	G DATA	1				
SAMPLED BY (PRI					,		LER(S) TURES:				
TUBING MAT (CIRCLI		PP PE NI	P TL TT		E TUBING WELL (FEET)			SAMPLE PL RATE (r			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	YN	CLEANING STEPS			Torres (OLO	0011 50750	T
FIELD FILTERED?	YN	FILTER SIZE (μm)		DUPLICATE	Y N		LECTED BY SE FLOW?	Y N N/A		COLLECTED SH TRAP?	Y N N/A
PRESER CHECKED		Y N N/A		ERVATIVES DED							
WEAT CONDI											
COMM	IENTS										
								-place Bladder			
		BING MATERIAL (	CODES: PP=	Polypropylene	e, PE= Polyeth	ylene, NP= N			ined, TT= Tel	flon	
Re	eviewed By	:					Date:				

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

		W BOULE		ROUNDV							
Client Name:	Hazan and Sawyer			Location:				Contact: Phone:			
Pate Sampled	4	15-15 11	12/10	SAL Project #	1003	3007		Project Name	GCREC Mou	ınd Groundwa	iter Analyses
Well Number	<del></del>	15-17	1 0 00	Sample ID	55			GPS LAT GPS LONG			
L		1 1 1 1		P	URGING			01 0 20110			
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		GROUND ELEV	O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
Purge Tech	nnique: q Sub	merged Screen ( FAL DEPTH - STA	1,1/4,1/4 Wel		rged Screen (1	EQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME			1/4 WELL VOLUME			3 WELL VOLUMES			5 WELL VOLUMES		
		EQUIPMENT VO		MP VOLUME +	(TUBING CA		BING LEGNTH	I) + FLOW CEL	\ \ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		Т
INITIAL TUBIN IN WELL				NG LEGNTH L (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID	$\times$	$\times$	$\times$		SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55- —	SAL-SAM- 0	$\times$	>
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe
0 553					4.7	20.7	703.4	2,31			
TUBIN		Capacity (gallons/t		= 0.0006; 3/16		/4" = 0.0026;	5/16" = 0.00			"5.88 010; 5/8" =	0.016
SAMPLED BY	// COMPANY	Г			AWIPLIN		PLER(S)				
(PRI	NT)	PP PE N	D TI TT		E TUBING	SIGNA	ATURÈS:		UMP FLOW	<u> </u>	
SAMPLING	6 (1 × 3	SAMPLING	T	FIELD	Y N	CLEANING STEPS		RATE	mL/min) 	<u> </u>	
FIELD FILTERED?	YN	ENDED FILTER SIZE (µm)		DUPLICATE	YN	VOC COL	LECTED BY SE FLOW?	Y N N/A		COLLECTE	YNN
PRESER	RVATION IN FIELD?	Y N N/A	1	SERVATIVES DDED							
	THER ITIONS										
COMN	MENTS								ì		
		PUMP CO	DDES: PP=P	eristaltic Pump	o, GP= Submer	rsible Grundfo	s Pump, IBP= Non-inert Plas	In-place Bladde tic. TL= Teflon	r Pump Lined, TT= To	eflon	
Ī	108	ING MATERIAL	CODES: PP	- Folypropyler	io, i L- i olye	anynomo, INI -	Date				

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		EVV BUUL					ING LO				
Client Name:	ı	Hazan and Sawye	er	Location:				Contact:			
Date Sampled	1	215-21		SAL Project #	100	3007		Phone: Project Name	GCREC Mo	ound Groundwa	ater Analyses
Well Number	T 1			Sample ID	54	<del>`</del> _		GPS LAT			
				Р	URGING			OF U LONG			
WELL		WELL		Screen				Static Depth	T	PURGE	
DIAMETER (Inches)		CAPACITY (gal/ft)		Interval (Feet)	UNK	То	UNK	to Water (Feet)		PUMP	PP GP IBP
TOTAL WELL		REFERENCE		GROUNE	D WATER		<del></del>	TUBING		TUBING	
DEPTH (Feet)	)	ELEVATION (NGVD)		(REFEREN	ATION ICE-STATIC)			DIAMETER (Inches)		CAPACITY (gal/ft)	
		ibmerged Screen ( DTAL DEPTH - ST			rged Screen (1 ICITY =	IEQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL			1/4 WELL			3 WELL			5 WELL		<u>L </u>
VOLUME		EQUIPMENT VO	VOLUME   OLUME = PUM	MP VOLUME +	TUBING CA	VOLUMES PACITY X TUI	BING LEGNTH	H) + FLOW CEL	L VOLUMES	<u> </u>	
SUMB	T	LGOI III.		1 10202	(1001110 0			1) . 1 201. 02.	T		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			T VOLUME		
INITIAL TUBI IN WELL				NG LEGNTH L (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID					SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\searrow$	$\searrow$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
0907					5.0	22.6	323.4	1.44			
		Capacity (gallons/f	· ·		· · · · · · · · · · · · · · · · · · ·				"=1.47, 12"	"5.88	
TUBIN	NG INSIDE DIA	A. CAPACITY (Ga	I./Ft.): 1/8" =	-			5/16" = 0.004	4; 3/8" = 0.00	6; 1/2" = 0.0	010; 5/8" = (	).016
				S/	AMPLIN(	G DATA	١				
SAMPLED BY (PRI	Y / COMPANY INT)						PLER(S) TURES:				
	ERIAL CODE E ONE)	PP PE NF	o TL TT	l .	TUBING WELL (FEET)			SAMPLE PU RATE (m			,
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	ΥN	CLEANING STEPS			***************************************		
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	ΥN	VOC COLL	LECTED BY SE FLOW?	Y N N/A		COLLECTED SH TRAP?	Y N N/A
PRESER	RVATION IN FIELD?	Y N N/A	B .	ERVATIVES DED							
WEAT											
COMN	MENTS										
	THE	PUMP COI BING MATERIAL C						ı-place Bladder		400	
	Ovioused By:		JUDES. FF-	Colypropylerie.	, FE- Folyeur	ylene, INF - IN	Deter		illeu, i i – i ci	1011	

Date:

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

## **GROUNDWATER SAMPLING LOG**

		GROUNDW	ATER SAMPLING I	LUG	
Client Name:	Hazan and Sawyer	Location:		Contact:	
Cheft Name.	Hazari and Sawyer	Location.		Phone:	
Date Sampled		SAL Project #	1003007	Project Name	GCREC Mound Groundwater Analyses
Well Number	A 15 21	Sample ID	77	GPS LAT	
Well Nulliber	915 24	Sample ib	<u> </u>	GPS LONG	
	<b>V</b>	PU	IRGING DATA		
WELL	WELL	Screen		Static Denth	PURGE

	V			Р	URGING	DATA					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		GROUND ELEVA (REFERENC	ATION	1.		TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	II I
		omerged Screen (				EQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	OLUME = (10	TAL DEPTH - ST	1/4 WELL VOLUME	X WELL CAPI	CITY =	3 WELL VOLUMES			5 WELL VOLUMES		
10202		EQUIPMENT V		IP VOLUME +	(TUBING CAI	PACITY X TUE	BING LEGNTH	) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBII IN WELL			FINAL TUBII IN WELL			PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST.	$\times$	$\times$	$\times$	>	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55- —	SAL-SAM-	$\geq$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
0923					5.1	21.5	324.0	0.94			
	Well (	Capacity (gallons/	foot): 0.75"=0.	02, 1.25"=(	0.06, 2"=0.	16, 3"=0.37	, 4"=0.65,	,		"5.88	
TUBIN		A. CAPACITY (Ga			'= 0.0014; 1	/4" = 0.0026;	5/16" = 0.004	4; 3/8" = 0.00	06; 1/2" = 0.	010; 5/8" =	0.016

				SF.	AIVIT LIIN	UAIA	<u> </u>					
SAMPLED BY (PRII		-				1	LER(S) TURES:					·
TUBING MATE (CIRCLE		PP PE NF	TL TT	SAMPLE LEGNTH IN V				-	E PUMP FLOW E (mL/min)			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Y N	CLEANING STEPS						
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	ΥN		ECTED BY	YNN		COLLECTED GH TRAP?	Υ	N N/A
PRESER CHECKED		Y N N/A		ERVATIVES DED								
WEAT CONDI												
COMM	IENTS											
		PUMP CO	DES: PP=Pe	ristaltic Pump, (	GP= Submers	ible Grundfos	Pump, IBP= Ir	ı-place Blac	der Pump			
	TUB	ING MATERIAL (	CODES: PP=	Polypropylene	, PE= Polyeth	nylene, NP= N	Ion-inert Plasti	c, TL= Tefl	on Lined, TT= Te	eflon		
Re	Reviewed By						Date	:[				

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

### **GROUNDWATER SAMPLING LOG**

OKOONDWATER CAMILEING EGG												
Client Name:	Hazan and Sawyer	Location:		Contact:								
Cilett Name.	Hazari anu Sawyer	Location.	oiloiter an	Phone:								
Date Sampled	0-12.24	SAL Project #	3007 1003007	Project Name	GCREC Mound Groundwater Analyses							
Well Number	Well Number Sample ID 55 GPS LAT											
Sample 15 5 6 GPS LONG												
DUDCING DATA												

#### PURGING DATA

				P	URGING	DAIA					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)	0.02	Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)	4.03	PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)	:	GROUNE ELEV (REFEREN	ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		bmerged Screen				EQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
	·····	TAL DEPTH - ST		x WELL CAPI	CITY =		1				
ONE WELL VOLUME	0.4	-	1/4 WELL VOLUME			3 WELL VOLUMES			5 WELL VOLUMES		
		EQUIPMENT V	DLUME = PUM	IP VOLUME +	(TUBING CA	PACITY X TUE	BING LEGNTH	I) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBII IN WELL			FINAL TUBII IN WELL		:	PURGE TIME START	0825	PURGE TIME END		TOTAL PURGED	
INST.	$\times$	> <	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM-	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
	0.50	0.50			5.4	27.2	289.8	0.78			
	2.50	1.0			5.4	\$ 7.7	2901	0,77			
0 831	0.50	1.50			5.6	知几	396.8				
	Well Capacity (gallons/foot): 0.75"=0.02, 1.25"=0.06, 2"=0.16, 3"=0.37, 4"=0.65, 5"=1.02, 6"=1.47, 12"5.88										
TUBIN	IG INSIDE DIA	A. CAPACITY (Ga	l./Ft.): 1/8" =	0.0006; 3/16"	= 0.0014; 1.	/4" = 0.0026;	5/16" = 0.004	1; 3/8" = 0.00	6; 1/2" = 0.0	010; 5/8" = 0	).016

				SA	AMPLIN	G DATA	\					
SAMPLED BY (PRII							LER(S) TURES:					
TUBING MATE (CIRCLE		PP PE NF	TL TT	SAMPLE LEGNTH IN V				SAMPLE PL RATE (r				
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	ΥN	CLEANING STEPS					·	
FIELD FILTERED?	Y N	FILTER SIZE (μm)		DUPLICATE	ΥN		ECTED BY E FLOW?	Y N N/A		COLLECTED 3H TRAP?	Y N N	1/A
PRESER' CHECKED		Y N N/A		ERVATIVES DED								
WEAT CONDI												
СОММ	ENTS											
				1 /				n-place Bladder	•			
	TUBING MATERIAL CODES: PP= Polypropylene, PE= Polyeth				ylene, NP= N	· · · · · · · · · · · · · · · · · · ·		ined, TT= Te	ition			
Reviewed By: Date:												

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			GK	CONDA	VATER S	DAIVIPLI	NG LOG				
Client Name:	Н	lazan and Sawyer		Location:			-68)	Contact: Phone:			
ate Sampled	12/10	10		SAL Project #	1003	3007-		Project Name	GCREC Mou	nd Groundwa	ter Analyse:
Vell Number				Sample ID	STE - F	XPing	Tank	GPS LAT GPS LONG			
1				P	URGING	DATA	1	GF3 LONG			<del></del>
WELL	1	WELL T		Screen				Static Depth		PURGE	PP GF
DIAMETER (Inches)		CAPACITY (gal/ft)		Interval (Feet)	UNK	То	UNK	to Water (Feet)		PUMP CODE	IBP
OTAL WELL EPTH (Feet)		REFERENCE ELEVATION (NGVD)		GROUND ELEVA (REFERENC	ATION			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
Purge Tech	nnique: q Sul	bmerged Screen ( TAL DEPTH - ST	1,1/4,1/4 Well		rged Screen (1	EQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	n (1 Well, 3,3	minutes)
ONE WELL VOLUME	DLUME = (10	TAL DEPTH - ST	1/4 WELL VOLUME	X WELL CAF	0111 -	3 WELL VOLUMES			5 WELL VOLUMES		
VOLUME		EQUIPMENT VO		L MP VOLUME +	- (TUBING CAF		BING LEGNTH	l) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH		ľ	FLOW CELL VOLUME		· .	EQUIPMEN T VOLUME		
INITIAL TUBII IN WELL				NG LEGNTH L (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID	$\times$		X	X	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (οC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe
9:55					7.33	17.7	1273	0.10			
				<u> </u>							
						<u> </u>	<u> </u>				
										-	
			<u> </u>	<u> </u>		10 01-02	7. 4"=0.65,	5"=1.02,	 6"=1,47, 12		
	Well	Capacity (gallons	/foot): 0.75"=0	).02, 1.25"=			5/16" = 0.00	•,			0.016
TUBI	NG INSIDE D	IA. CAPACITY (G	al./Ft.): 1/8	= 0.0000, 3/10	AMPLIN	IG DAT					
SAMPLED BY	Y / COMPANY	Joseph	that		7 (10)1 ==11	SAM	PLER(S) ATURES:	90-	ولت ٢	in	
TUBING MA	TERIAL CODE LE ONE)		IP TL TT	SAMPL	E TUBING WELL (FEET	)		SAMPLE P	UMP FLOW (mL/min)		
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Y N	CLEANING STEPS			To-1111/01/0	OOU FOTE	<u> </u>
FIELD FILTERED?	YN	FILTER SIZE (μm)		DUPLICAT			LECTED BY SE FLOW?	Y N N/A		COLLECTE GH TRAP?	YN
1	RVATION D IN FIELD?	Y N N/A		SERVATIVES DDED							
	THER DITIONS										
COM	MENTS										
1							5 155	In place Bladde	er Pump		
<u> </u>		PUMP C JBING MATERIAL	ODES: PP=F	Peristaltic Pum	p, GP= Subme	rsible Grundio	s Pump, IBP=	etic TI = Teflor	lined TT=T	eflon	

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

## GROUNDWATER SAMPLING LOG

GROUNDWATER SAMPLING LOG											
Client Name:	Hazan and Sawyer	Location:		Contact:							
Chefit Name.	Hazaii aliu Sawyei	Location.		Phone:							
Date Sampled	12/10/10	SAL Project #	1003007-60	Project Name	GCREC Mound Groundwater Analyses						
Well Number		Sample ID	Field Blank - DI	GPS LAT							
Well Number Sample ID FIELD FIELD GPS LONG											
PURGING DATA											

				P	URGING	G DATA					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEV	O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		bmerged Screen				1EQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	OLUME = (10	TAL DEPTH - ST	1/4 WELL VOLUME	X WELL CAP	ICITY =	3 WELL VOLUMES		<u> </u>	5 WELL VOLUMES		
	<u> </u>	EQUIPMENT V	DLUME = PUM	IP VOLUME +	(TUBING CA	PACITY X TUI	BING LEGNT	H) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBI IN WELL			FINAL TUBII IN WELL	NG LEGNTH _ (FEET)		PURGE TIME START		PURGE TIME END	:	TOTAL PURGED	
INST. ID	$\times$	><	$\geq$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM-	$\times$	>
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
7:53					5.71	12-1	1.49	9.44			
						,					
		apacity (gallons/f								5.88	
TUBIN	NG INSIDE DIA	A. CAPACITY (Ga	I./Ft.): 1/8" =	0.0006; 3/16"	= 0.0014; 1/	/4" = 0.0026;	5/16" = 0.004	1; 3/8" = 0.00	6; 1/2" = 0.0	5/8" = 0	0.016

				SA	A IVI I	LIN	GDAIA	<b>\</b>						
SAMPLED BY (PRII		Jorean	Hist				3	LER(S) TURES:	9	ne	fi the	31		
TUBING MATE (CIRCLE		PP PE NP	TL TT	SAMPLE LEGNTH IN \							JMP FLOW nL/min)			-
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Y	N	CLEANING STEPS							
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	Υ	N		ECTED BY E FLOW?	Y N	N/A	1	COLLECTED SH TRAP?	/ N	N/A
PRESERY CHECKED		Y N N/A		ERVATIVES DED										
WEAT CONDIT														
СОММ	ENTS													
								Pump, IBP= in-	<u> </u>					
		NG MATERIAL C	ODES: PP=	Polypropylene	PE=	Polyeth	ylene, NP= N	<del>, , , , , , , , , , , , , , , , , , , </del>	, TL= T	eflon L	ined, TT≈ Tef	flon		
Re	Reviewed By:						Date:							

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## GROUNDWATER SAMPLING LOG

		_	GR	NDMDO	VATER S	SAMPLI	NG LOG	<del>)</del>			
Client Name:		lazan and Sawyer		Location:				Contact: Phone:			
ate Sampled	12/10	/10		SAL Project	1003	007-	61	Project Name	GCREC Mou	und Groundwa	ter Analyse
Vell Number		·•		Sample ID	Fud P	007- lante-	TAP	GPS LAT GPS LONG			
				P	URGING	DATA					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GF IBP
OTAL WELL EPTH (Feet)		REFERENCE ELEVATION (NGVD)		GROUND ELEVA (REFERENC	ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
Purge Tech	nique: q Su	bmerged Screen ( TAL DEPTH - ST	1,1/4,1/4 Well	) q Submer	ged Screen (1	EQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	JEOME - (TC		1/4 WELL VOLUME			3 WELL VOLUMES			5 WELL VOLUMES		
PUMP VOLUME		EQUIPMENT VO	TUBING LEGNTH	MP VOLUME +	(TUBING CAI	FLOW CELL VOLUME	BING LEGNIF	1) + FLOW CEL	EQUIPMEN T VOLUME		
INITIAL TUBIN IN WELL				NG LEGNTH L (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST.	$\overline{}$	X	X	X	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM-	$\times$	$\geq$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describ
9:00					6.97	9.4	445	11.07			
											-
	Well	Capacity (gallons	/foot): 0.75"=(	0.02, 1.25"=	=0.06, 2"=0.	.16, 3"=0.3	7, 4"=0.65,		,	2"5.88	
TUBII	NG INSIDE D	DIA. CAPACITY (G	al./Ft.): 1/8"	= 0.0006; 3/16	6" = 0.0014;	1/4" = 0.0026;	5/16" = 0.0	04; 3/8" = 0.0	06; 1/2" = 0	).010; 5/8" =	= 0.016
				S	AMPLIN						
SAMPLED BY (PR	Y / COMPAN RINT)	YOKA	n His				PLER(S) ATURES:		بر H	mil_	
TUBING MAT	TERIAL COD LE ONE)	E PP PE 1	NP TL TT		LE TUBING N WELL (FEET				PUMP FLOW (mL/min)		
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	Y N	STEPS VOC CO	LLECTED BY	T., ,, ,,,,		S COLLECTE	D Y N
	RVATION	FILTER SIZE (μm)  Y N N/A	LIST PRE	DUPLICAT			RSE FLOW?	Y N N/A	THROU	JGH TRAP?	
CHECKEL	THER OITIONS	( IN IN/A	<u> </u>	.DDED							
COM	MENTS				- 00-0-6-	orcible Crupdi	ne Pumn IRP:	- In-place Bladd	er Pump		
		PUMP ( UBING MATERIA	CODES: PP=I	Peristaltic Pum P= Polvpropvle	ne, PE= Poly	ethylene, NP	= Non-inert Pla	= In-place Bladd stic, TL= Teflo	n Lined, TT=	Teflon	
<del></del>	Reviewed 6			,,,			Da	te:			
<u> </u>	.5555										

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

			GR	OUNDW	VAIERS	SAMPLI	NG LOG	j			
Client Name:	н	azan and Sawyer	r	Location:				Contact: Phone:			
Date Sampled	12/1	0/0		SAL Project #	100	3007	7	Project Name	GCREC Mou	ind Groundwa	iter Analyses
Well Number	Fan	<del>- 1                                   </del>	SATE	Sample ID		2		GPS LAT			
	Lyan	9. AND	57710 ]	 Pi	URGING			GPS LONG			
				45	ONGINE	אואטי					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		GROUND ELEVA (REFERENC	ATION			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
Purge Tec	hnique: q Sub	merged Screen	(1,1/4,1/4 Well)		ged Screen (1	EQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
WELL V	OLUME = (10	TAL DEPTH - ST	r	X WELL CAPI	CITY =	<del></del>			5 MEL 1		L
ONE WELL VOLUME		EQUIPMENT VO	1/4 WELL VOLUME	IP VOLUME +	(TUBING CA	3 WELL VOLUMES PACITY X TUE	SING LEGNTH	i) + FLOW CEL	5 WELL VOLUMES L VOLUME		
PUMP VOLUME		Egon MEIV	TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME	·	
INITIAL TUBI IN WELL			FINAL TUBII IN WELL			PURGE TIME START	•	PURGE TIME END		TOTAL PURGED	
INST. ID	X	> <	X	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\geq$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
0942					7.2	11.9	13.2	231			
TUB	Well o	Capacity (gallons	/foot): 0.75"=0 Sal./Ft.): 1/8" =	0.0006; 3/16		1/4" = 0.0026;	5/16" = 0.00			2"5.88 .010; 5/8" =	= 0.016
				<u> </u>	AIVIPLIN	IG DATA	<u> </u>				
	BY / COMPANY RINT)						PLER(S) ATURES:	75	Ward	/ 	
1	TERIAL CODE	PP PE N	NP TL TT		E TUBING I WELL (FEET	7)		-	PUMP FLOW (mL/min)		
SAMPLING INITIATED	1	SAMPLING ENDED		FIELD CLEANED	YN	CLEANING STEPS	<u> </u>		TSEMLVOLS	S COLLECTE	nl la
FIELD FILTERED?		FILTER SIZE (μm)		DUPLICAT			LLECTED BY RSE FLOW?	Y N N/A		IGH TRAP?	Y N N/A
1	ERVATION D IN FIELD?	Y N N/A		DDED							
	ATHER DITIONS	Ole	AC								
COM	IMENTS										
		PUMP C	CODES: PP=P	eristaltic Pum <sub>l</sub>	p, GP= Subme	rsible Grundfo	s Pump, IBP=	In-place Bladdo	er Pump	Teflon	
	TU	IBING MATERIA	L CODES: PP	= Polypropyle	ne, PE= Polye	etnylene, NP=	ivon-inert Pla	suc, it- renor	i Lineu, TT-	. 511011	
	Reviewed B	v.					Dat	:e:			

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### **GROUNDWATER SAMPLING LOG**

		· · · · · · · · · · · · · · · · · · ·	Gr	CONDV	VAIER	SAIVIPL	ING LOC				
Client Name:	ŀ	Hazan and Sawye	Г	Location:				Contact:			
Date Sampled	12/1	0/10		SAL Project	100	300	1	Phone: Project Name	GCREC Moi	und Groundwa	ater Analyses
<u> </u>	14/1	<u> </u>	^ 4	#		<u> </u>	<u> </u>	GPS LAT			
Well Number	UP	-F15-2	U b	Sample ID	64			GPS LONG			
				P	URGINO	<b>DATA</b>					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEV	O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		bmerged Screen TAL DEPTH - ST			rged Screen (1	EQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	OLOIVIE - (10	TAL DEFIN-31	1/4 WELL VOLUME	X WELL CAP		3 WELL VOLUMES			5 WELL VOLUMES		L
	1	EQUIPMENT V	DLUME = PUN	IP VOLUME +	· (TUBING CAI	PACITY X TUI	BING LEGNTH	l) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBI IN WELL			FINAL TUBII IN WELL	NG LEGNTH . (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST.			$\geq$	$\geq$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\geq$	
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (οC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
6720		1.50			4.4	22.1	449	0,67			
	Well C	Capacity (gallons/f	oot): 0.75"=0.	02, 1.25"=(	0.06, 2"=0.1	6. 3"=0.37.	4"=0.65,	5"=1.02, 6	"=1.47, 12"	5.88	
TUBIN		A. CAPACITY (Ga	•		= 0.0014; 1/	4" = 0.0026;	5/16" = 0.004	; 3/8" = 0.00	6; 1/2" = 0.0	)10; 5/8" = (	0.016
<u> </u>			<del>' </del>	S	AMPLIN	G DATA	\				
SAMPLED BY (PRI			··· · · · · · · · · · · · · ·			SAMP	LER(S) TURES:	Za	War	1	
TUBING MAT		PP PE NF	P TL TT		TUBING WELL (FEET)			SAMPLE PL RATE (n			
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	YN	CLEANING STEPS	FOTED BY		LCEMIN/OLC	COLLECTED	T
FIELD FILTERED?	YN	FILTER SIZE (μm)		DUPLICATE	YN		ECTED BY E FLOW?	Y N N/A		COLLECTED H TRAP?	Y N N/A
PRESER CHECKED		Y N N/A		ERVATIVES DED				. ,			
WEAT CONDI											
СОММ	IENTS										
								-place Bladder			
		ING MATERIAL (	CODES: PP=	Polypropylene	, PE= Polyeth	ylene, NP=N		,	ined, TT= Tef	lon	
Re	eviewed By:	L					Date:	<u> </u>			

		EKIV AI EW BOULI						•	813-85	5-2218	
			GF	ROUND	<b>NATER</b>	SAMPL	ING LO	3			
Client Name:		Hazan and Sawye	er	Location:				Contact:			
								Phone:			
Date Sampled				SAL Project #	1003	3007	_	Project Name	GCREC Mo	und Groundwa	ater Analyse
Well Number	10 G1	2-150		Sample ID		66		GPS LAT			
	<b>VI</b> C.	0 10 0		<u> </u>		***************************************		GPS LONG			
				P	URGINO	G DATA					
WELL DIAMETER (Inches)		WELL CAPACITY (gal/ft)		Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)		PURGE PUMP CODE	PP GF IBP
TOTAL WELL DEPTH (Feet)		REFERENCE ELEVATION (NGVD)		ELEV	O WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
Purge Tec	hnique: q Su	bmerged Screen	(1,1/4,1/4 Well	) q Subme	rged Screen (1	IEQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
	OLUME = (TO	TAL DEPTH - ST		x WELL CAP	ICITY =						
ONE WELL VOLUME			1/4 WELL VOLUME			3 WELL VOLUMES		_	5 WELL VOLUMES		
		EQUIPMENT V	DLUME = PUN	IP VOLUME +	(TUBING CA	PACITY X TUI	BING LEGNTH	l) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBII IN WELL				NG LEGNTH _ (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST. ID	$\times$	$\times$	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM-	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (οC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
0938					4.7	22.3	508	D.89			

Well Capacity (gallons/foot): 0.75"=0.02, 1.25"=0.06, 2"=0.16, 3"=0.37, 4"=0.65, 5"=1.02, 6"=1.47, 12"5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

				<u> </u>	7111 PIL	O D/\\\	•					
SAMPLED BY (PRI						l .	LER(S) TURES:	Jan	Wir	/		
TUBING MAT (CIRCLI		PP PE NF	P TL TT	SAMPLE LEGNTH IN \	TUBING WELL (FEET)			SAMPLE PL RATE (r				
SAMPLING INITIATED		SAMPLING ENDED		FIELD CLEANED	ΥN	CLEANING STEPS						
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	ΥN	1	ECTED BY E FLOW?	Y N N/A		COLLECTED H TRAP?	ΥN	N/A
PRESER CHECKED		Y N N/A	ľ	ERVATIVES DED								
WEAT CONDI	—	Clar	i N									
СОММ	ENTS											
	_	PUMP COI	DES: PP=Per	ristaltic Pump, (	GP= Submers	ible Grundfos I	Pump, IBP= Ir	n-place Bladder	Pump			
	TUB	ING MATERIAL C	ODES: PP=	Polypropylene,	PE= Polyeth	ylene, NP= N	on-inert Plasti	c, TL= Teflon L	ined, TT= Tef	lon		
Re	viewed By:		_				Date					

110 BAYVIEW BOULEVARD, OLDSMAR, FL 34677 813-855-1844 FAX 813-855-2218

			GR	OUNDY	VAIER	SAMPLI	NG LOG			·	
Client Name:	н	azan and Sawyer		Location:				Contact: Phone:			
ate Sampled				SAL Project #	100	300	7	Project Name	GCREC Mou	nd Groundwa	iter Analyses
Vell Number	J12-	- 20D		Sample ID	1	67		GPS LAT GPS LONG			
				Р	URGING	DATA					
WELL		WELL		Screen				Static Depth		PURGE	PP GP
DIAMETER (Inches)		CAPACITY (gal/ft)		Interval (Feet)	UNK	То	UNK	to Water (Feet)		PUMP CODE	IBP
OTAL WELL EPTH (Feet)		REFERENCE ELEVATION (NGVD)		GROUNE ELEV/ (REFERENC	ATION			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
Purge Tech	nnique: q Sub	omerged Screen (	1,1/4,1/4 Well	) q Submer	rged Screen (1	EQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	n (1 Well, 3,3	minutes)
WELL VO	DLUME = (TO	TAL DEPTH - ST	ATIC DEPTH)	x WELL CAPI	CITY =						<u> </u>
ONE WELL VOLUME			1/4 WELL VOLUME			3 WELL VOLUMES	L		5 WELL VOLUMES		
		EQUIPMENT VO	LUME = PUN	IP VOLUME +	(TUBING CAI	PACITY X TUE	BING LEGNIF	I) + FLOW CEL			
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			T VOLUME		·
INITIAL TUBII IN WELL				NG LEGNTH L (FEET)		PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST.	$\times$	$\times$	X	X	SAL-SAM-63 	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM- 0	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (∆ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe
1244					5.0	22.9	342.9	1.13			<del>                                     </del>
	<u> </u>		1 0 2751 6	1.05	=0.06, 2"=0.	.16, 3"=0.37	7. 4"=0.65,	5"=1.02,	6"=1.47, 12	<u> </u>	
TUDU	Well (	Capacity (gallons/ A. CAPACITY (G	toot): 0.75"=0	0.02, 1.25"= 0.0006: 3/16		·	5/16" = 0.00			.010; 5/8" =	0.016
1081	NG INSIDE DI	A. CAFAOITI (O.	1.71 (.). 170	S	AMPLIN	IG DATA	Δ				
	Y / COMPANY				7 (1)	SAME	PLER(S) ATURES:				
TUBING MA	TERIAL CODE LE ONE)	PP PE N	P TL TT		E TUBING WELL (FEET			<b>0</b> , == .	UMP FLOW (mL/min)		
SAMPLING INITIATED		SAMPLING ENDED		FIELD	YN	CLEANING STEPS				00115075	51
FIELD FILTERED?	Y N	FILTER SIZE		DUPLICAT	E Y N		LECTED BY SE FLOW?	Y N N/A		S COLLECTE GH TRAP?	YNN
PRESE	RVATION O IN FIELD?	Y N N/A		SERVATIVES DDED							
	THER DITIONS										
COM	MENTS										
			0050 BD F	and shalk a Duran	o CD- Submo	rsible Grundfo	s Pump, IBP=	in-place Bladde	er Pump		
		PUMP C IBING MATERIAL	ODES: PP=P	enstante Pum	p, GF = Subine	thule a ND	Non-inert Plac	stic TI = Teflon	Lined TT=T	eflon	

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## GROUNDWATER SAMPLING LOG

	•	NOONDI	AILI CAIII LIIIO		
Oli t Ni	II Course	Leasting		Contact:	
Client Name:	Hazan and Sawyer	Location:		Phone:	
Date Sampled	12/10/11	SAL Project #	1003007	Project Name	GCREC Mound Groundwater Analyses
Maria Nationale and	Davi SKI A	Sample ID	10 Cl	GPS LAT	
Well Number	PZ04- BKG 9	Sample ID	69	GPS LONG	
		D	IDCING DATA		

				Р	URGING	3 DATA					
WELL DIAMETER (Inches)	1.25	WELL CAPACITY (gal/ft)	0.04	Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)	7.21	PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)	9.0	REFERENCE ELEVATION (NGVD)		ELEV	) WATER ATION CE-STATIC)			TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		bmerged Screen TAL DEPTH - ST				IEQ Volume, 3	, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	0.1	C	1/4 WELL VOLUME			3 WELL VOLUMES			5 WELL VOLUMES		
		EQUIPMENT V	OLUME = PUM	1P VOLUME +	(TUBING CA	PACITY X TUI	BING LEGNTH	I) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBI IN WELL			FINAL TUBII IN WELL			PURGE TIME START		PURGE TIME END		TOTAL PURGED	
INST.	$\times$	$\times$	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM-	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
0840	0.50			7.27	5.3	21.4	72.9	1.10			
		Capacity (gallons/f				-,		,		5.88	2010
TUBIN	NG INSIDE DIA	A. CAPACITY (Ga	il./Ft.): 1/8" =	0.0006; 3/16"	= 0.0014; 1.	/4" = 0.0026;	5/16" = 0.004	1; 3/8" = 0.00	6; $1/2$ " = 0.0	010; 5/8" = 0	0.016

				O,	ZIAII	F11.4	GDAIA	ı.					
SAMPLED BY (PRIN							SAMPL SIGNAT	` '					
TUBING MATE (CIRCLE		PP PE NF	TL TT	SAMPLE LEGNTH IN V					SAMPLE PU RATE (r				
SAMPLING INITIATED	DFYD	SAMPLING ENDED		FIELD CLEANED	Y	N	CLEANING STEPS						
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	Y	N	VOC COLL REVERSE		Y N N/A	1	COLLECTED . SH TRAP?	Y N	N/A
PRESER\ CHECKED I	1	Y N N/A		ERVATIVES DED			-						
WEAT CONDIT	—					~							
СОММІ	ENTS												
									-place Bladder				
		ING MATERIAL C	ODES: PP=	Polypropylene	PE=	Polyeth	ylene, NP= No	on-inert Plastic	c, TL= Teflon L	ined, TT= Te	flon		
Re	Reviewed By:						Date:						

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## GROUNDWATER SAMPLING LOG

		INCOMPA	MILK SAMPLING L	JG	
Client Name:	Hazan and Sawyer	Location:		Contact:	
Oliche Hame.	- Tazari and Gawyer	Location.		Phone:	
Date Sampled	12/10/10	SAL Project #	1003007	Project Name	GCREC Mound Groundwater Analyses
Well Number	02 04 04	Sample ID	70	GPS LAT	
Well (Valinger	DS 24- BKC 24	Jample 1D	70	GPS LONG	

PURGING DATA											
WELL DIAMETER (Inches)	2.0	WELL CAPACITY (gal/ft)	0.1428	Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)	10.11	PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)	24.0	REFERENCE ELEVATION (NGVD)		GROUND WATER ELEVATION (REFERENCE-STATIC)				TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
		bmerged Screen TAL DEPTH - ST				EQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	2.5		1/4 WELL VOLUME	0.6	- ;	3 WELL VOLUMES			5 WELL VOLUMES		, ,
		EQUIPMENT V	DLUME = PUM	1P VOLUME +	(TUBING CA	PACITY X TUI	BING LEGNTH	l) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBING LEGNTH IN WELL (FEET)		FINAL TUBII IN WELL			PURGE TIME START	0803	PURGE TIME END		TOTAL PURGED		
INST. ID	$\times$	$\times$	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63-	SAL-SAM-55- —	SAL-SAM- 0	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
0814	2.75	2.74	0.25	10.17	5.2	24.0	297.9	1,12			
0817	0.75	3.50	,1	10.17	5.1	24.1	295.1	0.72			
0820	0.75	4.25	ti.	10.17	5.1	24.1	296,2	0.71			
	Well Capacity (gallons/foot): 0.75"=0.02, 1.25"=0.06, 2"=0.16, 3"=0.37, 4"=0.65, 5"=1.02, 6"=1.47, 12"5.88										
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											

				J,	ZIALL	TII.4	GDAIA	١					
SAMPLED BY / COMPANY (PRINT)							SAMPI SIGNA	, ,					
TUBING MATERIAL CODE (CIRCLE ONE)		1 PP PE NP 11 11 1		SAMPLE TUBING LEGNTH IN WELL (FEET)				SAMPLE PUMP FLOW RATE (mL/min)					
SAMPLING INITIATED	0821	SAMPLING ENDED		FIELD CLEANED	Υ	N	CLEANING STEPS						
FIELD FILTERED?	ΥN	FILTER SIZE (μm)		DUPLICATE	Υ	N	VOC COLL REVERSI	ECTED BY E FLOW?	Y N N/A	L	COLLECTED 3H TRAP?	1 Y	N/A
I .	PRESERVATION CHECKED IN FIELD?			ERVATIVES DED									
WEAT CONDI													
СОММ	ENTS												
				istaltic Pump, (									
	TUB	ING MATERIAL C	ODES: PP=	Polypropylene,	PE= F	olyeth	ylene, NP= N	on-inert Plasti	c, TL= Teflon	Lined, TT= Te	flon		
Re	Reviewed By:							Date:					

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### **GROUNDWATER SAMPLING LOG**

		J. (O O 11 D 1	TATER OAM LING	LOO	
Client Name:	Hazan and Sawyer	Location:		Contact:	
Cilent Ivaine.		Location.		Phone:	
Date Sampled	12/10/10	SAL Project #	1003007	Project Name	GCREC Mound Groundwater Analyses
Well Number	27 17 115 21	Sample ID	71	GPS LAT	
Weir Warriber	PZ17-115-24	Sample ID	71	GPS LONG	
		<b>D</b>	LIDCINIC DATA	· · · · · · · · · · · · · · · · · · ·	

#### PURGING DATA

PURGING DATA											
WELL DIAMETER (Inches)	0.75	WELL CAPACITY (gal/ft)	0.02	Screen Interval (Feet)	UNK	То	UNK	Static Depth to Water (Feet)	9.04	PURGE PUMP CODE	PP GP IBP
TOTAL WELL DEPTH (Feet)	24.0	REFERENCE ELEVATION (NGVD)		GROUND WATER ELEVATION (REFERENCE-STATIC)				TUBING DIAMETER (Inches)		TUBING CAPACITY (gal/ft)	
Purge Technique: q Submerged Screen WELL VOLUME = (TOTAL DEPTH - ST						EQ Volume, 3	3, 3 Minutes)	q Partially Sub	merged Scree	en (1 Well, 3,3	minutes)
ONE WELL VOLUME	0.3	3	1/4 WELL VOLUME			3 WELL VOLUMES	1.01		5 WELL VOLUMES		
		EQUIPMENT VO	DLUME = PUM	IP VOLUME +	(TUBING CA	PACITY X TUE	BING LEGNTH	l) + FLOW CEL	L VOLUME		
PUMP VOLUME			TUBING LEGNTH			FLOW CELL VOLUME			EQUIPMEN T VOLUME		
INITIAL TUBING LEGNTH IN WELL (FEET)		FINAL TUBII IN WELL	•		PURGE TIME START	0905	PURGE TIME END		TOTAL PURGED		
INST.	$\times$	$\times$	$\times$	$\times$	SAL-SAM-63	SAL-SAM - 65	SAL-SAM-63	SAL-SAM-55-	SAL-SAM-	$\times$	$\times$
TIME	VOLUME PURGED (Gallons)	TOTAL VOLUME PURGED (Gallons)	PURGE RATE (gpm)	Depth to Water (Feet)	pH (SU) (Δ <0.2)	TEMP (oC) (Δ <0.2)	SP COND (uS/cm) (Δ <5%)	DO (mg/L) (% SAT <20)	TURBIDITY (NTUs) (<20 NTU)	COLOR (Describe)	ODOR (Describe)
0909	0.40	0.40	0110	9.04	5.7	23.1	2901	0.88			
0912	0.40	0.80	(l	9.05	5.7	22.1	2924	0.40			
0914	0.40	1.20	11	9.05	517	22.1	294.1	0.52			
		Capacity (gallons/f								"5.88 	0.046
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016											

				3 <i>P</i>	AIVIPLIN	G DATA						
SAMPLED BY (PRII						SAMPI SIGNA	, ,	Zon	Wo			
TUBING MATERIAL CODE (CIRCLE ONE)		PP PE NP TL TT		SAMPLE TUBING LEGNTH IN WELL (FEET)				SAMPLE PU RATE (n				
SAMPLING INITIATED	0917	SAMPLING ENDED		FIELD CLEANED	Y (Ñ)	CLEANING STEPS						
FIELD FILTERED?	Y (N)	FILTER SIZE (μm)		DUPLICATE	Y (N)	VOC COLL REVERS	ECTED BY E FLOW?	Y N MA		COLLECTED Y	N	MA
PRESERVATION CHECKED IN FIELD?		M N/A		ERVATIVES DED				-				
WEATHER CONDITIONS		() 1÷	41									
СОММ	ENTS									_		
								n-place Bladder				
		ING MATERIAL (	CODES: PP=	Polypropylene,	PE= Polyeth	ylene, NP= N			ined, IT= Te	tion		
Re	viewed By:						Date:	<u> </u>				